Housing

342 The type of house, whether big or lowly, made a difference in the comfort and care of women. The big houses were teak-paneled and floored with a good roof of thatch, tile or corrugated iron. Their high piles insured dryness during flood season. The sleeping and living space was a single airy open room, often with one or two sides balustraded rather than solid, and protected from the weather by the roof's overhang. The kitchen was sometimes a separate room. There was always one small enclosed room, perhaps ten feet square, or larger, with a door and a window. This room was used for keeping valuables under lock, and whenever privacy was desired: as a marriage chamber for bride and groom, or as a quiet room for a senile parent. Because of its almost solid walls, it was poorly ventilated and hot. Childbirth took place in this little room, [844] if convenient, or out in the main part of the house. The fire-rest was in this room so that the dreaded wind could be kept out.

342 The poor lived in modest earth-floored cottages of bamboo
184 frame, thatch sides and roof, with one or two raised wood plat-
352 forms for sleeping and sitting. In the rainy season, these
844 cottages could be damp. In fact, one October the water was observed ankle deep inside a house, and the wife splashed around at her chores. Under the latter conditions, a woman in childbirth would be moved to some kinsmen's house. Delivery took place on one of the sleeping platforms, and post-partum rest was on a plank raised off the earth floor, unless space permitted that the plank and temporary fire-floor be placed on the platform. On one observed occasion reed mats as protection from drafts were temporarily set up, making an enclosure about three feet high within which a mother lay in her post-partum rest period.

Cash

434 Cash was short to everyone. The poor felt very poor and
426 the rich did not feel rich. This was because the rice-money,
[556] which came in a lump sum once or twice a year, was at once turned over to clear debts, to make large purchases of agricultural equipment, to repair the house, or to perform elaborate ceremonies. What was left over was not kept around the house for day-to-day expenses for fear of robbery, but was immediately loaned out. Thus cash was not available for emergencies
434 which in childbirth might mean taxis or hospital care. Being
844 rich or poor made little difference in Bang Chan, however, as
556 to the quality of the obstetrical help given.

Within the community all women received about the same service. Though the poor felt the 20 to 30 baht cost[5] of a midwife was too expensive, and so utilized the free help of a compassionate kinsman (usually the mother) or neighbor, the latter sometimes were as expert manually as a midwife or even on their way to becoming one. The few critical cases, rich or poor, who were taken to the Minburi Health Center managed to pay the 60 to 70 baht fee (120 baht if penicillin were used).

General Attitudes Towards Having Children

In these farm families, children were an asset, for their help, skills, and earnings enriched the family. Boys and girls were equally desired. A girl did household chores and at her marriage brought in the considerable payment of "milk money." A boy could be ordained and so "bring merit" to his parents. Both could farm, and both would provide cherishing care to the parents in their old age, but this was expected particularly of daughters. A child usually arrived within a year or so of marriage, to the rejoicing of everyone. Until the birth of a child, marriage only partially changed the young couple's status, especially if they were still living under the parental roof. With children they became the heads of a family, with authority over, and responsibility for, the younger generation. In the few polygynous households, the position of a younger wife was enhanced when she bore a child. Sometimes on the birth of this or another child, the money paid to the bride's parents at the time of the wedding was turned over to the new mother. Title to some of the familial land, never given until a marriage had proved stable, might be conveyed to one spouse or the other. The arrival of a child was sometimes a signal for preparations for moving out and establishing an independent household, or for establishing a "second kitchen," i.e. two separate families living under a single roof. A study of the birth-rituals (Chap. V) gives evidence that the arrival of a child, especially the first, was of deep psychological and social significance to the parents. The marriage bonds were strengthened if the first-born were male (cf. p. 65). A couple without children was "sad" and "a little less rich." Barrenness was caused by lack of merit.

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5. Analysis of Janlakha's figures, borne out in observation, shows that per capita income was low, that there were many poor people, and because of the seasonal nature of income, even the rich were short of cash (1955:135-143). Ninety-two baht were the average "expenses for medicine" including delivery fees (1955:142).

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7
Bang Chan

SUMMARY

105 26 [22] A general description is given of conditions in a Siamese rice village, 1952-54, as they relate to food supply and food habits. Activities at various seasons of the year are described. The heavy work seasons occurred during transplanting and harvest. In the dry season, many ceremonials and festivals were held in which food played an important role. Such occasions provided opportunity to "make merit" and add to one's prestige as did the regular offering of food to the priests, throughout the year. The relatively large financial obligations undertaken by those sponsoring ceremonies was a major factor in the economy of the village.

105 262 433 Food was mostly home produced and an important factor in the standard of living was the number of productive hands available. Rice was the first essential for any meal. Home milled rice was used, even in part, only by a minority of households. Fish, fresh or preserved, was the food next in importance to rice. Use of flesh foods other than fish was probably inhibited by Buddhist tenets which prohibit the taking of life, but some poultry, oxen, and other flesh foods were used. [235] Nearly all of the families in Bang Chan raised [433] chickens, and some raised ducks, but about 3/5 of all eggs [244] produced were sold. Every family had some sort of kitchen [245] garden, including banana trees and other plants, but spices [227] and chili were much more commonly grown than vegetables and fruit. Swamp cabbage, the green leafy vegetable used most often, grew wild in the canals. A calendar of fresh foods commonly used in Bang Chan is presented.

[443] Cash expenditures for food were small. When canals were navigable, boat venders brought produce and during the busy work seasons farmers often bought fish as well as the usual foods: onions, garlic, limes, cocomut, palm sugar and small amounts of vegetables.

[434] [078] Many households increased their income by the sale of eggs, vegetables gathered from the canal and other items. Culture of tilapia and mushrooms, begun during the period of study, was undertaken by a considerable number of farmers between 1953 and 1955. Both enterprises were apparently regarded primarily as a supplementary source of cash rather than as a means of improving the home food supply, and both efforts had been largely if not entirely abandoned by 1957.

105 264 Preparation of some typical dishes, meal service and techniques of eating are described. For adults, two meals a day were usual, except during the busy work seasons when a third meal might be eaten. Menus were similar for all. Two observations from records of school children were 1) that over 90% of them ate snacks, many of which were bought from venders on the school grounds. Sweets and fruit were the

594 What differences in circumstances existed that might affect nutritional level? On the one hand were relatively isolated nuclear families, which we estimated as 15-20% of the
• 434 families, living in tiny separate cottages.[1] Usually with in-
444 adequate or no land, they earned an irregular income by hiring
423 themselves out for farm or other work. At the other extreme,
596 in a hamlet-like cluster of dwellings, lived a closely affili-
532 ated group of kin. A senior couple more or less headed the
476 married sisters, brothers, or children, maybe with a hired man, or family that as autonomous households cooperated amicably in economic and domestic tasks. We estimated these as 20-25% of the Bang Chan families. The larger social unit, having more hands to produce, and to share tasks, was better able to provide good food and general health care to its members, than a small isolated family. Four problems more easily handled by the larger group were household chores and child-care, farming, borrowing, and earning money.

855 Young children had to be constantly tended lest they fall into the water, the fire, or under the buffalo's feet. They never entered the fields during work. Fishing and gathering of water plants was complicated because in boats, small children had to be held. Where there were but two parents and young children, one parent could not do many things until the other came home. Perhaps neither partner could stay away long enough to get a big batch of fish or greens from the canal, or go to the store. Cooking was simplified, or food might be
[252] prepared once a day only. Respite came only when the first
596 born was able to help oversee a younger child, sometimes stay-
476 ing home from school to do so. Where the adult cooperative group was larger, movement was freer. All the strong adults could work in the fields or at a job, confident that the home was well tended. They came home to a well-prepared meal, ready when they wanted it. Such households had more fresh fish because farm work could be completed sooner, hence more persons
[871] could devote themselves to fishing. Some physically able members could even be spared and financed to go beyond the required four grades of elementary school.

241 Plowing could be done by a man and wife, but for both
462 transplanting and harvesting which had to be done within a few
476 days, large groups were necessary. Two patterns of auxiliary
444 group labor prevailed: reciprocal cooperative work, and hiring of labor.

113
114 1. Janlekha, 1955, categorized families as 5% "one-
162 person," 59% nuclear, 8% limited extended (including one or
594 more parents of a spouse), 27% extended (including dependent
596 married couples or other collateral relatives), and the temple
423 residents. At least 32% of the families had inadequate or no land. His figures do not indicate the degree of domestic cooperation which was an ameliorating factor in well-being.

426 Because of scattered farms and frequent shortage of cash, borrowing food and other items, and many exchanges of service were necessary. Blood-kin were easier to approach, and in the larger social unit, nearer. Borrowing from a non-kin neighbor was supposed to be less frequent, and the favor had to be returned more promptly and exactly.

434 Most opportunities for increasing cash income such as hiring out as temporary farm labor, digging canals, marketing eggs, mushrooms, or cooked snacks, took one out of the home, often overnight. In the small family, one partner was left at home. Both could not go because fear of theft forbade leaving a home unoccupied for any length of time.

The Buddhist Priesthood

792 At the temple lived twenty or thirty priests under the abbot, with a group of boys to serve them. The priesthood was maintained by daily voluntary offerings of food, with larger donations of food and commodities at certain times. Persons who thus "made merit," by supporting the priesthood, by giving to the needy, and adhering to the ethical tenets of the Buddhist religion, reaped a reward of health, happiness, wealth and eventually, freedom from rebirth. The immediacy of these beliefs must not be underestimated. Men only were ordained. They might resign at any time after three months, but some spent their lives in the priesthood.

792 In Bang Chan, throughout the year, the priests set out
262 at dawn to receive cooked food for the day. They appeared
431 at houses by more or less specific arrangement and were given a generous share of the food prepared by the family for its own use, sometimes with the addition of fruit and other delicacies. Each priest stopped at two or more houses. The food then was brought to the temple to be eaten at 8 and 11. For the rest of the day the priests fasted, i.e. they ate no solid food, but drank liquids such as tea, soft drinks, and recently, tinned milk and a fortified malted milk drink. Priests were also invited to eat in homes not only at large ceremonies, but at small merit-making occasions. Sporadic special food offerings were also received. If a buffalo died, much of the meat was usually given to the temple. Traditional practitioners, mid-wives, and ceremonialists always gave the priests a portion of the fees from their practice which consisted in 1 or 2 liters of milled rice, a bunch of bananas, and perhaps cash. On the numerous Buddhist holidays and at specially organized temple convocations, quantities of cooked, preserved and raw foods were brought to the temple and apportioned among the priests. From this bounty a meal was served to the priests, who ate while the villagers looked on in satisfaction.

One of the duties of the abbot was to coordinate the

221 132 243 244 245 262 434 503 196 811

Chart 1. SEASONAL CYCLE - BANG CHAN, THAILAND, 1953-54

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Season	→ ←WET→							←COOL→		←HOT→		
Temperature (°C)[1]	30	29	28	29	29	28	26	25	25	28	30	30
Humidity, rel., %	77	80	81	81	80	78	74	70	70	65	66	67
Rainfall	→heavy		moderate	←heavy→		←light→			←negligible→			
Canals	rising			high		(floods)			lowering fast		low,dry	
Cultivation of Rice	plowing→ seedbed grown			TRANSPLANTING		growing		early var. mature ←HARVEST→				
School	vacation							vacation			vacation	
Cash available Source	cash in hand→ rice					cash jobs→		←cash shortage→	main rice sale		cash in hand→	
Fruit;vegetables	→	←new planting→							←annuals die→			
Fish: Supplies	ponds drained→								←ponds drained→			
Maturation			←many varieties→						←best varieties→			
Preserving	←much→		←moderate→						←most→			
Ceremonies	ceremonies→			←Buddhist Lent→							←ceremonies→	
Dietary survey	→	←Round I→		←Round II→				←Round III→			←Round IV→	

1. Mean temperatures and relative humidity estimated from charts for Bangkok and the central plain of Thailand (Bunnag and Dhararak, 1947). Mean monthly temperature range from 25-30°C corresponds to 77-86°F; diurnal variations are greater, averaging 18°F (10°C) in April and 22°F (12°C) in January.

2: Hauck et al. D,E-5 (1952-1954) 1958 AO7 Central Thai AO7 Bang Chan

221 Despite the availability of fish and of vegetables in
435 the canal, the highest cash outlays for family food occurred in this transplanting season. Several factors probably contributed to this: increased food energy needs because of long hours of work, venders again accessible because of high water, cash from sale of last year's crop still in hand, the convenience of cooked foods and snacks, and perhaps the need to replenish household supplies after the long drought, or after their depletion by a ceremony.

221 The two months of September and October during which
[512] the rice grew afforded some respite. People slept a little longer and breakfast was not prepared so early. The skilled cook might take over and could give more attention to food preparation. All who could, took the opportunity to visit
[738] and take trips. A few might go on a pilgrimage. Therefore,
264 in this season, all family members were less often together
[22] at the evening meal. Fishing was a continuous occupation,
[43] with some preserving and home craft. Jobs such as selling
[854] food in the market were undertaken for ready cash; houses and equipment were built or repaired. Finally the threshing floor was prepared.

[342] High water caused time-consuming inconvenience only in
[33] earth-floored cottages where it was necessary to keep the rice stores and chickens dry, move the cook-stove, and either build plank walks or cook standing ankle deep in water.

243 By November, the earliest varieties of rice matured.
221 Those who owned several rice fields could put at least one into an early type. Many persons, by then short of rice, were glad to be thus tided over. One grandmother divided her first harvest among her several long-since-independent married children; 2 tangs[1] of milled rice per family, 40 for herself.

The heroic labor of harvest occupied December, January, and February. Farmers raced against the all-too-fast lowering of the water in the canals, without which sheaves could
[467] not be moved and buyers could not come for the paddy. People worked all daylight hours in the fields, threshed far into
[226] the night. At this time also many varieties of fish matured
434 and men fished night after night. Just when the convenience
426 of purchased food was greatest, cash was exhausted. With
443 rice money in sight, venders might be generous with credit, but they could navigate only the larger canals, so were not available to many.

000 There was an important psychological difference between

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[804] 1. One tang equals 20 liters. Milled rice weighs about 16 kg. per tang.

There was an important psychological difference between
221 the two work seasons. At planting time, people were anxious;
243 at harvest they were happy. People saw cash just ahead, for
439 the crop was now safe. Each host of a cooperative work party
466 gave at least one big convivial feast, the best he could pro-
527 vide and even the hired laborers got a round of liquor. People
461 joked more than usual at work. Two boat loads of workers were observed racing down a canal at 6 a.m., shouting and cheering, although they had probably worked long hours for days or weeks before. Everyone knew that a joyous season was at hand.

221 When the crop was in, the people rested, fished, and be-
226 gan to prepare for big ceremonies demanding organized work.
527 Supplies of fish were needed for preserving or for feasts. Labor and engines were now available, and with water low, fish-ponds could be conveniently drained, and the fish on the muddy bottom caught. A pond might be drained two or three times a year, but timing was determined by the availability of equipment and workers and by the needs of the annual ceremonial cycle. One pot of fish was given to each helper at a cooperative pond-draining.

221 Most farmers sold their rice in February. Capital was
45 invested in farm equipment, buffalo, housing and ceremonies. Debts were cleared if possible. Cash expenditures for food, which had declined progressively since the beginning of the rice year, reached the yearly minimum, mostly because people had ample time to fish. People also saved up their money if they were sponsoring a ceremony, ate lightly at home if they
[871] were going to one. Since school closed from March 15 to May 1, because of the heat, money was not given to children for snacks.

221 The land dried up and cracked, rainwater for drinking
132 gave out, and some canals were reduced to mud. Cherished
312 plants were kept alive by watering, but no new planting could
241 be done. Buffalo, which at other seasons were confined and
231 fed, now roamed the fields, nibbling stubble. Everyone was busy and happy. Ordinations, weddings, cremations, merit-making feasts and several big holidays came one after another.
796 Of the four New Year's Days observed in Bang Chan, the Buddhist New Year, which because of the lunar calendar fell about mid-April, was the most important, being celebrated over two days with extensive offerings of food to the priests and with other activities. The official New Year's Day, January 1, and the traditional New Year's Day about November 1, had rather
[563] slight observances. Chinese New Year's, in February, was celebrated by the Chinese residents who presented a school teacher and their hamlet headmen each with a boiled chicken and a Chinese sweet. Lent officially closed the ceremonial season, but the advent of plowing-time slowed the pace considerably.

When the rains finally came, the rice year started again.

was given away fresh to selected kin and friends, including those who helped to butcher, and the remainder was salted and dried. Of this, 7 kg. were kept and 5 kg. sold. Moslems are forbidden to eat an animal with two or four legs which "dies," although eating dead locusts or fish is not forbidden. Some Moslems in Bang Chan reported offering dead animals to Buddhists in barter for other materials.

Oxen, a sign of prosperity, were bought as calves by the Moslems and fattened for meat, usually with a ceremony in mind. In 1955 (Goldsen and Ralis, 1957) only 5 householders in Bang Chan raised hogs, and 4 of these had 1 or 2 only. Moslems ate no pork. A permit from the district officer was necessary for slaughtering a buffalo or an ox but not for hogs. Natural deaths of such animals were supposed to be reported.

Poultry was not commonly used for food in Bang Chan. It was the poor man's "feast" food suitable for guests. One couple in the lowest income level killed one chicken or a duck once a year to provide the traditionally good meal for their cooperative harvest helpers. Others, better off, might serve chicken especially at men's dinners. Pigeons were raised for sale in the market by one Moslem family. In 1953-54, one person was trying to raise a few turkeys for sale, as word had reached Bang Chan that turkeys were in demand for foreigners' holiday dinners. By 1957 turkey-raising for cash was spreading, but some villagers objected to having them around "because they look like vultures and bring misfortune."

Various wild creatures were used for food whenever they were caught. Turtle curry was considered a great delicacy, but as turtles, which could be caught from May to February, brought a good price in Bangkok, experts usually sold their catch. Frogs and turtles were sometimes kept in a jar until needed. Eels, frogs, cobra and other snakes were used for curry. Field rats, available all year, were roasted.

Fish. - Next to rice, fish constituted the most abundant food in the diet in Bang Chan. Either fresh or preserved,[1] they were available throughout the year. Killing

1. According to observation in 1952-54, fish caught in excess of immediate needs were preserved for later use. Serpentheads ((1)plaa (3)chauaun), which are about 7 or 8 inches long, and pilot fish ((1)plaa (2)sa-(2)lid), about 4 or 5 inches long, were commonly salted and dried. Heads and tails were removed and the fish were split open and salted overnight. The following morning the fish were washed and spread on fiber trays in the sun to dry. Some excess fish might be dried at anytime of year, but larger quantities were done during the hot, dry season. The process was usually complete within a week.

311
361 rice land. Water-ways, however, were public areas, and any
[505] convenient wide spot might be selected as a private garden. It was marked with stakes, and was apparently not disturbed by others.

262 Mushroom culture as a side line activity of rice far-
344 mers developed during the period when this study was in
433 progress. After threshing, in early 1954, two of eleven families that participated in the dietary study started raising mushrooms. Although most of these were sold, both families reported frequent inclusion of mushrooms in the family diet. One informant commented that families that planted mushrooms also ate them almost every day, and said "Adults complain that it is a wearisome food but children still like it." Mushrooms were used fried, with pork, in soup or in curry.

[434] As with tilapia, mushroom culture appears to have been undertaken primarily to increase cash income, and was abandoned when it was no longer profitable financially (see Appendix A, pp. 101-102).

Food Purchased and Cash Expenditures for Food

262 Relatively few foods were purchased, but some of these,
438 such as onion, garlic, limes, tamarind, coconut and palm sugar were so frequently used that without cash to buy them, villagers would have considered their diet monotonous. Many had their own supply of fresh and dried chilies, fishsoy, and shrimp paste, which might, however, be inadequate for their needs. Other foods not commonly produced in Bang Chan were purchased for variety.

262 Estimates of mean annual consumption and cost of pur-
435 chased foods, for 106 households in Bang Chan are shown in
128 Table 1.

262 The list of purchased foods presented by Janlekha (1955)
432 was compiled after preliminary interviews with a number of household heads. It includes the principal food items which were commonly purchased in Bang Chan. In addition to these, the affluent household studied by Sharp et al. (1953) spent appreciable amounts for vegetables (listed as cucumbers, lettuce, cabbage, etc.) and fruit (pineapple, mangoes, melons, etc.) and small amounts for peanuts, soy sauce and vinegar sauce. Eggplant and white radish were bought by more than half the families that participated in the dietary study, and were used on 11 and 8 survey days respectively. Other vegetables and fruits, bought by one or two of the 11 families, and used on not more than 3 of the 44 survey days were: mung beans, snap beans, bean sprouts, Chinese celery, cucumber, leeks, lettuce, mushrooms, sugar cane, sweet potato, taro, turmeric, (2)ma-(1)faj or rambai, Thai nutmeg, orange, pineapple, rambutan, sandorica and watermelon. Salted and pickled white radish and pickled bamboo shoots were the only

[Text continues on page 23--- Analyst]

273 in 1955 (Goldsen and Ralis, 1957, p. 57) said they drank whiskey often, 22% drank occasionally, 47% seldom, and only 22% said they never drank it.

Sale of Home Produced Foods

433 434 443 Although a majority of the families in Bang Chan made most of their cash income by rice farming, sale of other home produced foods, fish, and food materials such as swamp cabbage and lotus stems which grew wild in the canals was a minor but relatively steady source of income for many families. Six of the 11 families that participated in the dietary study obtained some income from sale of food[1]. The woman frequently had major responsibility for these activities. As noted by Sharp et al. (1953), a few poor families only, added to their income by selling fish.

121 In connection with this study, our concern with sale of home produced foods is primarily with the nutritional rather than the economic aspects,[2] although the two cannot be completely dissociated. Do activities of this sort on the part of some families make a greater variety of foods available to the villagers as a whole? Are some foods sold for cash which from the nutritive standpoint, might well be kept for home use? If so, is the cash thus obtained used to purchase other foods or non-food items? Is the food purchased as useful, from the nutritive standpoint, as that sold? From the standpoint of improving the nutritive value of the diet of Bang Chan families in general, would more home production of fruits, vegetables, fish and eggs by most families be feasible, or should a few families be encouraged to develop these activities on a year round basis, to increase the local supply of food other than rice? Questions of this sort must be considered by anyone attempting to improve food habits in the village.

Annual Calendar of Foods Commonly Used

221 262 122 123 From the records extending over the period of a year, of foods used by various families participating in the dietary study, and from food records provided by children in the health classes in December 1952, February, May, June, July, September, October and November 1953, and January 1954, a calendar has been constructed showing the approximate times of year at which the foods most commonly used in Bang Chan were available (Chart 2). Foods included in this chart were

1. See Table 8, p. 62.

2. See Janlekha (1955).

[Text continues on page 29 --- Analyst]

per day were calculated for Groups A and B by Round and for all survey days (24 days for 6 families in Group A, 20 for 5 families in Group B). The total amounts eaten per capita per day, of various food groups, and the relative nutrient contributions of these groups were also calculated.

Results and Discussion

Socio-Economic Situation of the Two Groups of Families Studied

General Socio-Economic Conditions. - In the course of the study the observers were able to obtain information, both by inquiry and direct observation, on the economic condition of the families. Questions about land holdings, the amount of land farmed, number of working buffaloes owned, number of priests to whom food was given and sources of income, were asked during the second Round of the survey, after the participants were acquainted with both the field workers and the procedures. As raw foods were weighed, the observer asked if they were home grown or prepared, and recorded the cost of foods purchased.

Although our sample was not stratified with respect to economic condition, the families in Group B, i.e. those chosen for apparently better nutriture, proved to be more prosperous than those in Group A (Table 8). With the exception of Household 222 in Group A, rice production was the main source of income. Families in Group B had a greater capital investment in land and buffalo, and worked more land, having more productive hands per family available. Farm work was finished sooner, hence members could begin intensive fishing earlier than in Group A. All children aged 13-15, in both groups, did light farm work and/or selling in market, cooking, baby tending and care of buffalo. In all households, husband or wife or both came from old families in the community, hence had extensive kinship relations.

From the viewpoint of parents, the "peak of life" was the time when children were no longer dependent, but productive, unmarried workers whose earnings stayed within the family. Household 16 was such a family, forward looking, progressive and optimistic. The successful and respected couple in Household 25 would enter this "peak of life" situation in a few years. Household 20 included a widower and his almost grown daughter living with his younger brother and the latter's family, and their senile mother, in harmonious cooperation. Ample land, housing, buffalo and farm labor combined with other skills, made for good living. In Household 21, two strong, unmarried sons still lived with their elderly parents. The only poor family, of low status, in Group B, was Household 23. By great industry, especially in

[Text continues on page 63 ··· Analyst]

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592
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Table 8. Summary of Economic Conditions of the Two Groups of Households Participating in Dietary Studies

Household Group and Code No.	Members	Land: Rai Worked	Land: Rai Owned	Buffalo[1]	Food Cost[2]: Total	Food Cost[2]: Per Cap.	No. of Priests Fed	Sources of Income
Group A								
222	5	0	0	0	2.96	0.59	0	Labor contractor; hired out as labor; boat repair; fishing; vegetables sold; canal digging.
12	3	12	0	1	2.70	0.90	0	Rice production; occasional work in Bangkok.
215	5	14	0	1	1.59	0.32	0	Rice production; wife, a medium.
67	5	16	6	1-0	2.52	0.50	0	Rice production; eggs sold; road jobs.
2	6[3]	20	0	2	3.97	0.66	3	Rice production; "professional cook".
103	8	47	12	5	2.04	0.26	2[4]	Rice production; eggs, fish, mushrooms sold; buffaloes raised.
Mean		18.2	3.0	1.6	2.37	0.49	0.7	
Group B								
23	8[3]	6	0	1	1.56	0.19	0	Rice production; selling fish and vegetables; masseur.
21	4	25	25	3	1.92	0.48	3	Rice production; headman
16	8	47	47	5	2.70	0.34	2	Rice production; vegetables, fruit sold; road jobs.
25	8	50	50	3	7.97	1.00	2	Rice production; eggs, mushrooms sold.
20	9	66	51	11	2.47	0.27	2	Rice production; ceremonialist; doctor; carpentry; trading; eggs collected and sold.
Mean		38.8	34.7	2.6[1]	3.32	0.45	1.8	

1. The buffalo belonging to Household 67 died during the year. In Household 20, the brother who moved in owned several buffalo, thus the total for Group B was more than the number shown.

2. Average cash expenditure per day, in baht. (One baht equalled about 5 cents) Household 222 received rice as part of wages.

3. Babies born during Round IV were not included. In Household 23, a 12-year old son served as temple boy and was away from home much of the time.

4. Rainy season only, when priests could come by boat; counted as 1 in computing average.

fishing and selling vegetables, they managed to obtain a fair diet. The father's skill as a masseur was valued especially at periods of heavy farm work, after childbirth, and by the cooks at a ceremonial feast. This brought in from 2 to 12 baht per week.

In Group A, Families 67 and 103 were at the most difficult period of life, with young, dependent children, and housing, land and equipment to be acquired. By great industry, including egg production from a flock of 60 chickens, and by severe "belt-tightening," Household 103 was lifting itself into a propertied position. The parents in Household 67 were shy. One or the other of the two older children often stayed home from school to look after the baby, so that both parents could work. Husband and wife in Household 12 were both very shy, the only ones in the survey group who were at all reluctant to participate. They seemed ashamed of limited food. The wife was frequently ill. In Household 222, the 14-year old daughter often gathered and sold vegetables at Minburi before school in the morning. She might have full charge of the younger children for days at a time. A daughter who worked as a servant in Bangkok contributed 50 baht per month to this household. In Household 215, the activities of the wife as medium were predominant. Pay included food, often cooked, and the free use of 3½ rai of land, as well as cash. Maintenance of a son in school in Bangkok cost about 1000 baht per year plus 60 tang of rice. In Household 2, the elderly wife's services as "boss-buyer and cook" at ceremonials, and as marriage go-between did not bring in cash, but gifts, clothing and much participation in feasts.

All families in the survey group were Thai Buddhists, and 6 of them offered food to priests more or less regularly. On 17 of the 24 survey days when the observer visited these households, food was offered. Two of the 5 families that did not customarily give food to priests, did so on one and two survey days, respectively. In one case food was offered to a son who had been recently ordained. Rice was always included in the food offered, and in 3 of the 20 instances observed rice only was given. The weight of cooked rice given by one family in one day ranged from 185 to 1210 grams, with an average of about 600 grams. In 16 instances, some cooked food such as fish or vegetable curry was given with the rice; in one instance fresh pineapple was given.

Cash Expenditures for Food. - Mean total, and per capita daily cash expenditures for food for survey days, are shown, by household in Table 8. (See Table 2, p. 23 for division of food expenditures for Groups A,B) Although cash expenditures for food varied considerably, the amounts in all cases were small, and approximated figures obtained by Janlekha (1955) for 106 households. Larger consumption of animal products, which were the most expensive items purchased,

concerning its culture and use. Tilapia culture was learned largely by trial and error, and was considered primarily as a source of extra cash. If it had been regarded also as a means of improving health through increasing the family's food supply, and if the homemaker had been shown how to use this unfamiliar fish in familiar ways, the outcome might have been different. Increased use of fermented fish and of small dried fish which are eaten whole, should be encouraged. So long as the ability of human beings to adapt to such low calcium intakes without harm has not been proved, any feasible means of increasing the calcium content of the diet seems worth trying.

More home consumption of eggs would be desirable, but their ready sale and acceptability for barter may present an obstacle to increased home use. Increased production would probably lead to some increased home use at least at the peak season. Duck eggs which are less often sold, might be stressed both for this reason, and because of their greater size. The idea held by some that eggs are not good for children nor for pregnant women should be countered when possible. Since hard cooked eggs have many ceremonial uses, they might be presented as "strengthening" food. Hard cooked eggs, which could be prepared the night before, would be convenient as breakfast for workers who would otherwise go to the field without food, for lunch to be carried to the field or to school, and for occasions when parents are to be away from home, as at a ceremonial, and should leave food at home for children.

Milk, as canned, dried or malted milk preparations, was considered an appropriate gift for the priests, who are forbidden to eat solid food after the 11 a.m. meal. Some of this may be shared with the temple boys. The respected old ladies and others who stay overnight at the temple on the Buddhist holy day, and who observe the same rules as the priests for this time, also like to drink milk, often with coffee. Perhaps the wat committee could be taught how dried or canned milk should be reconstituted, and could direct that this be done. They could both spend some of the cash offerings for milk and encourage those who buy gifts of food for the priests to include milk among them. People gladly bought food for the priests and would probably accept on the authority of the head priest or respected elders, the idea of buying certain foods of high nutritive value, even though these cost more. If a small group of leaders, such as the wat committee or the hamlet headman were instructed in the dangers of contaminated water and the values of good food, with the implication that the best available should be offered the priests both daily, and on ceremonial occasions, improved practices might spread to home consumption, since most food is prepared in the home.

The importance of merit making and the relatively large cash expenditures involved in ceremonials, will probably influence acceptance of any improved practices which involve cash outlay. If some leaders were interested in dietary

Notes on Tilapia Culture in Bang Chan

226 654 In 1952, the Thai government, at the suggestion of FAO, began to encourage tilapia culture. Fingerlings and some information on tilapia culture could be obtained from the Minburi district office, where a demonstration pond was maintained. Early in 1953, we learned from the records of the district officer that three persons in Bang Chan, two of them hamlet headmen, had obtained tilapia from this source. In 1953 the commune chief called a meeting in the village and explained the importance of tilapia raising. In May 1955 when Ralis conducted a survey in Bang Chan (Goldsen and Ralis, 1957), tilapia raising had been tried in nearly a third (31%) of the households, but was considered by 2/3 of the respondents to pay little.

The authors comment:

> From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply [434] rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months.

From the comments just quoted, tilapia culture appears to have been undertaken for the anticipated cash return. No [114] information was obtained by Ralis concerning the extent to which the villagers used tilapia to increase their supply of fish for home use. In the summer of 1957 members of the research group who visited Bang Chan found that no one was raising tilapia; they were neither a source of food nor of cash. Some indication was obtained that their flavor and texture were not agreeable. Clearly the attempt to introduce a rapidly growing but unfamiliar variety of fish failed in Bang Chan. An understanding of the reasons for this failure might help to prevent other costly failures in future.

Notes on Mushroom Culture in Bang Chan

177 244 Goldsen and Ralis (1957) commented as follows:

> Three years ago the commercial growing of mushrooms in Bang Chan was unknown. By 1955, the practice of growing mushrooms had reached into many homes (44 per

arbitrary, were it not for the Buddhist temples, a neighboring government-operated primary school, and a few small stores, all of which provide a center for the community. There the inhabitants paddle their boats for religious observances, their children attend school, and anyone with a few minutes gossips over a cup of coffee. These people, furthermore, speak of themselves when outside the community as coming from Bang Chan, and the temple familiarly called "Wat Bang Chan" helps outsiders to identify the particular area. 361 621

The community's 1600 inhabitants live in one of seven hamlets, each with an officiating headman who may offer some leadership to the neighborhood. Bang Chan has no political unity beyond the informal influence of the head priest at the temple, for administrative units of local government disregard its social and psychological coherence. On one side of the main canal headmen go a rough two miles to attend meetings with the District Officer, while their neighbors across the canal must spend half a day on the canal to reach the district offices which govern them. 161 621 634 624

As the survey results indicate, about 88 per cent of the households receive the major portion of their income from cultivating rice, though many of these men and women turn briefly to other occupations during the slack season. The remaining fraction is divided between persons engaged in trade as storekeepers or vendors and those in such service occupations as highway labor or school janitor. 621 243 434 443 464

A little less than half of the population owns the land or a portion of the land it works, the remainder renting from neighbors and landholders living away from Bang Chan. Though land becomes scarcer every year and its subdivision into small plots finer, land problems and landlord problems are not important concerns of the area farmers. Economic factors also grant higher status within the community to land holders than to renters and the landless. So also age and religious piety bring respect. Yet social structure articulates flexibly enough to afford a young renter of good reputation and energy a decent hearing at a meeting, and indeed, he might carry his point in a group of wealthy landholders. Two or three times in past generations young men have moved from thatched houses in Bang Chan to high government positions in Bangkok through fortunate connections that enabled them to attend leading schools, as well as through their own industry. People merely invoke the Buddhist concept of accumulating merit in present and past lives through good deeds when they comment on the rise of such persons, for with sufficient merit all is possible. Thus regularity in the socio-economic order becomes a moderate level of probability admitting many exceptions. 423 427 554 621 [555] [771]

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*177
*178 The Innovations

243
433 A. Agricultural Innovations: During the past few years, certain innovations have come to Bang Chan which have increased agricultural productivity and improved the level of living. Some of these innovations are listed below.

1. The small motor. One innovation is the small engine, 402 gasoline motor, which is used mainly as a water-lifting device for irrigation purposes. In 1950 only five small motors were found in *177 Bang Chan.* Twenty-one per cent of the respondents in the 1955 *178 survey, however, report owning these motors; the majority of the [241] respondents (68 per cent) claim to have used this labor-saving device which is sometimes jointly owned by more than one household and is frequently loaned out.**

2. Straw mushroom growing. Three years ago the com- 244 mercial growing of mushrooms in Bang Chan was unknown. By 1955, • 434 the practice of growing mushrooms had reached into many homes *177 (44 per cent of the respondents report that they have engaged in *178 this activity***). Even if no mushrooms have ever been grown in a given household, it is still likely that the individuals in it are aware of the practice and have observed it closely through the mushroom growing activities of their friends, relatives, and neighbors (reported in 43 per cent of the households). Only a few households (13 per cent) report that they have never grown mushrooms or have never been exposed to it in this way.

One advantage in the culture of straw mushrooms is that it permits quickly realized returns. The cycle, from sowing spores in moistened straw to harvesting the mushrooms, takes about two to three weeks. Another advantage is that there is relatively little heavy work or investment required besides the acquisition of straw and spores. A third advantage is a ready market, for the plant is sought by Chinese dealers in Bangkok who supply hotels and restaurants. Bang Chan rice farmers who engage in mushroom growing as a sideline activity sell it either to local middlemen or directly to the Chinese in Bangkok.

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[113] * Sharp, L., H. M. Hauck, K. Janlekha, and H. D. Textor, Siamese Rice Village, A Preliminary Study of Bang Chan. Thailand, Cornell Research Center, June, 1953.

[125] ** The questions: "Do you own a small engine motor or not? (If "NO"): Have you ever made use of one in your work?"

[125] *** The question: "Have you ever grown mushrooms, or not?"

3. Tilapia raising. In 1951, FAO suggested to the Thai Government that cultivation of tilapia be encouraged to help meet the rising need for fish in Thailand. Tilapia is a species of fish which multiplies and grows relatively fast. The strain, which came originally from Africa, is popular in Malaya and was expected to be easily marketable, thus a source of added income in Thailand. The Thai Government followed the FAO suggestion in 1952: a few Bang Chan residents dug the special pools required for the fish culture and began to raise tilapia mainly for commercial purposes. About a third (31 per cent of the households*) reported in 1955 that they have engaged in this activity. 177* 178* 228

From discussions with the people it appears that they are learning by trial and error to raise tilapia. Though fish culture is, for them, mainly a sideline activity, nevertheless, it requires the building of a special dam, care in preventing other fish from devouring young tilapia and maintaining the appropriate balance of fresh water in a given pool. The loss resulting from the fish dying or being eaten by others is relatively high. Although tilapia multiply rapidly, the cash return is not as great as that realized from mushroom growing. The cycle of raising tilapia lasts about four months. [434]

4. Artificial fertilizer. Artificial fertilizer has made its appearance in Bang Chan only recently. Informants in the community reported that only two farmers had tried artificial fertilizer in 1952. In the 1955 survey, 12 per cent of the farmers reported that they have used fertilizer or are using it. This fertilizer is mainly ammonium sulphate sold both by the government and commercial distributors. Only a few farmers (3 per cent) have ever employed it for all, or for the larger part of their fields. The remainder (9 per cent) have used it on a trial basis in only a small part of their fields.** 241 177* 178*

Fertilizer, then, has been tried out on a much smaller scale than either mushroom growing or raising tilapia. Apparently two important barriers operate against its wider acceptance. First, its high cost and the difficulty of purchase and transportation (66 per cent of farmers with ideas on the subject gave these reasons for not using fertilizers); second, popular opinion in Bang Chan declares that artificial fertilizer is not fit for low lands since it washes away and is thus wasted (29 per cent of the farmers with ideas on the subject advanced this as reason for not using fertilizer). In addition, fertilizer yields delayed returns.

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* The question: "Have you ever raised tilapia, or not?" [125]

** The question: "Have you ever used fertilizer or not? .. To what extent have you used fertilizer on your fields?" [125]

Economic Level

It could be, of course, that people on a higher economic level are in a better position to try agricultural innovations, since they might more easily afford not only an initial cost but also possible loss in trying out something new.

The survey data provide several indicators of economic level. Among other questions on this subject, all respondents were asked: "Here in your household how many buffaloes do you own?" About one-quarter reported owning no buffaloes at all; a little more than that proportion reported owning four or more; the median number of buffaloes reported was between two and three.

In Bang Chan buffalo are an indication of wealth, as is the amount of land planted to rice. Thus all farmers in the sample were also asked, "Last time you planted rice, how many rai* of rice did you plant?" About a third reported that they planted 19 rai or less; about one-fourth reported that they planted 40 rai or more; the median number of rai reported was 28.3.

If the reported number of buffalo owned is an adequate measure of economic level, then one would expect a high correlation between reported buffalo ownership and reported number of rai planted. If the expectation is borne out by the survey data the two indices may be used interchangeably. (Table 7 reports this relationship for the male farmers in the sample.)

TABLE 7. FARMERS# WHO OWN MORE BUFFALOES ARE MORE LIKELY TO CULTIVATE LARGER LAND HOLDINGS

"...how many buffaloes do you own?"

"...how many rai of rice did you plant?	None, one or two (99)	Three or more (112)
Less than 9	31%**	11
10-19	32	7
20-29	18	27
30-39	15	23
40-or more	3	41

Male farmers only
** Percentages may add to 99 or 101 owing to rounding of figures.

* A Thai land measure; 1 rai = 0.4 acres.

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Decisions to use all these innovations--with the possible exception of the use of fertilizer--seem to be more widespread among the upper economic levels of the population. (See Table 8.) One wonders whether the initial link between use of the motor and readiness to try the innovations may actually disguise a more basic relationship based simply on ability to afford the investment and the risk.

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TABLE 8. FARMERS* ON HIGHER SES LEVELS ARE MORE LIKELY THAN OTHERS TO HAVE USED THE MOTOR, TO HAVE GROWN MUSHROOMS AND TO HAVE RAISED TILAPIA

	Ownership of Buffaloes	
	2 or less (99)	3 or more (112)
Used motor		
Own	6%	37%
Use	53	45
Neither	41	18
Grew mushrooms		
Yes	30%	60%
No	70	40
Raised tilapia		
Yes	26%	42%
No	74	58
Used fertilizer		
Yes	12%	17%
No	78	83

* Male farmers only

The following table presents again the initial relationships between use of motor and readiness to try out other innovations. But this time the link is examined separately for persons on the different economic levels.

Table 9 was made by first dividing the population into two groups, those from high and those from low economic levels. The resulting two groups were then further subdivided on the basis of whether they owned (or used) a motor or whether they did not. In each of the four resultant groups the percentage that raised tilapia was then calculated. Thus among those of high economic level who own or use motors, 43 per cent raised tilapia, and we infer that 55 per cent did not raise tilapia. The same procedure was repeated to ascertain the percentage that has tried fertilizer and subsequently the percentage that has tried mushroom growing.

This table shows that in tilapia raising both factors operate independently and cumulatively, i.e. people who are better off economically and who also own or use the motor are almost two and a half times as likely to raise tilapia as their economically depressed counterparts who neither own nor have access to the motor. (45 versus 17 per cent respectively.)

The link between use of the motor and attempt to try fertiliser holds regardless of economic level.

The initial link between ownership or use of the motor and growing of mushrooms, on the other hand, is shown to be a conditional one. Those on a higher economic level are more likely than others to try mushroom growing, whether or not they own or use a motor. Those on the lower economic level, with access to a motor are more likely to take up tilapia culture.

TABLE 9. RELATIONSHIP OF USE OF MOTOR AND OTHER INNOVATIONS TO ECONOMIC LEVEL

	Economic Level			
	High*		Low**	
Owns or used motor (Proportion who have raised tilapia)				
Yes	45%	(89)	33%	(37)
No	25	(21)	17	(40)
Owns or used motor (Proportion who have tried fertiliser)				
Yes	20%	(89)	10%	(37)
No	5	(21)	*	(40)
Owns or used motor (Proportion who have tried mushroom growing)				
Yes	60%	(89)	36%	(37)
No	37	(21)	23	(40)

* Three buffaloes or more
** Two buffaloes or fewer

[231]

Literacy

One important hypothesis to account for differential acceptance of innovations is that the decision to try them out is aided by exposure to the available sources of information. If this were indeed the case, then users of these innovations will be more apt to be able to read and write than be illiterate.

Literacy was determined by asking each respondent whether

TABLE 11. LITERATE FARMERS* ARE MORE LIKELY TO HAVE USED THE MOTOR AND TO HAVE TRIED MUSHROOM GROWING

	Illiterate (Cannot write a letter) (92)	Literate (Can write a letter) (118)
Motor		
Own	16%	26%
Use	35	40
Neither	48	34
Mushrooms		
Have tried	36%	53%
Have not	62	47
Fertilizer		
Have used	12%	17%
Have not	88	83
Tilapia		
Have tried	29%	39%
Have not	71	61

* Male farmers only

If Bang Chan were like certain areas of the United States and Europe, it might be objected that such a relationship between acceptance of innovations and literacy reflects a spurious link with economic level: that illiterates tend to come from the economically deprived strata of the population; hence an observed relationship with literacy may actually reflect the initial correlation with economic level. In Bang Chan, however, this is not the case. A Bang Chan farmer who is well-to-do is as likely to be illiterate as literate, as is illustrated by the table below.

TABLE 12. LITERACY AND ECONOMIC LEVELS ARE UNRELATED IN BANG CHAN*

	Literacy	
	Low (91)	High (119)
Economic Level		
Low	48%	36%
High	52	64

* Male farmers only

Hence the correlation between use of innovations and literacy may be taken at face value and does not reflect a spurious link with economic level.

TABLE 14. HIGH EXPOSURE TO COMMUNICATIONS MEDIA IS LINKED TO ACCEPTANCE OF THE MOTOR

	Exposure to Radio			
	High			Low
	Listens Daily (45)	Listens Occasionally (66)	Listens Seldom (148)	Never Listens (60)
Small Engine Motor				
Used it	89%	78%	64%	46%
Didn't use it	12	22	36	54

	Exposure to Movies			
	High			Low
	Ten times or more (161)	4-9 times (60)	1-3 times (75)	None (33)
Used it	76%	69%	59%	36%
Didn't use it	24	31	31	64

Of course it is important to check whether these relationships hold true when people on different economic levels are examined separately; for literates as well as for illiterates. We infer that the basic link between use of the motor and exposure to the media of communication holds for literate as well as illiterates; for poorer as well as for richer farmers. More specifically, the relationship between exposure to the communications media and decision to use the motor is even more marked for less well-to-do and for the illiterate farmers, in contrast to the better-off farmers and those who can read and write.

TABLE 15. EXPOSURE TO MOTION PICTURES IS LINKED TO ACCEPTANCE OF MOTOR ESPECIALLY FOR THE ILLITERATES AND FOR THE ECONOMICALLY LESS WELL-OFF*

	Exposure to Motion Pictures	
	High	Low
	(Percentage Using Motor)	
Economic Level		
Low	76% (47)	46% (33)
High	85 (66)	75 (45)
Literacy		
Illiterate	67% (36)	44% (33)
Literate	88 (77)	82 (61)

* Male Farmers Only

TABLE 16. INHABITANTS WHO HAVE ADOPTED URBAN EATING PATTERNS ARE MORE LIKELY THAN OTHERS TO BE EXPOSED TO MASS COMMUNICATIONS AND URBAN CONTACTS

	Eating Patterns	
	With hands (342)	With fork and/or spoon (64)
Listens to radio		
Regularly (daily)	10%	25%
Occasionally	17	28
Seldom	31	33
Never	22	10
Has seen a movie		
Ten times or more	40%	72%
4 - 9 times	19	17
1 - 3 times	28	10
Never	13	1
This past year, how many times did you go to Bangkok?		
None	26%	7%
Once	18	13
2 - 4 times	29	23
5 or more times	28	55

When acceptance of urban influences is measured even on the basis of this index, the evidence is clear that it is linked with acceptance of the agricultural innovations. Those responsive to urban influence are twice as likely as others to use fertiliser (21 per cent versus 9 per cent), one and a half times as likely to grow mushrooms (57 per cent versus 39 per cent), and one and a quarter times as likely to use a motor than the others (82 per cent versus 61 per cent). There is no noticeable relationship, however, between tilapia raising and responsiveness to urban influences. The respective proportions are shown in Table 17.

These relationships between acceptance of urban patterns and decision to use certain innovations remain constant for those on high as well as low economic levels and also for the literate as well as illiterate farmers.

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TABLE 17. VILLAGERS RESPONSIVE TO URBAN PATTERNS ARE MORE LIKELY THAN OTHERS TO USE AGRICULTURAL INNOVATIONS

Agricultural Innovations	Eat with fork and/or spoon	Eat with hands
Artificial fertilizer		
Tried it	21%	9%
Never did	79	91
Total cases*	(69)	(218)
Mushrooms		
Tried growing	57%	39%
Never did	43	61
Total cases	(84)	(242)
Small engine motor		
Own one or have used it	82%	61%
Never did	18	39
Total cases	(84)	(242)

* For farmers only; excludes all non-farmers

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TABLE 18. ACCEPTANCE OF URBAN PATTERNS IS LINKED TO ACCEPTANCE OF MOTOR AND MUSHROOM GROWING, IRRESPECTIVE OF ECONOMIC AND LITERACY LEVELS

	Economic Level				Literacy Level			
	Low		High		Illiterate		Literate	
Acceptance of urban patterns	(Proportion who used motor)							
Eat with hands	55%	(77)	76%	(73)	47%	(73)	83%	(76)
Fork or spoon	75	(20)	89	(34)	69%	(16)	90	(38)
	(Proportion who tried mushroom growing)							
Eat with hands	28%	(77)	58%	(73)	38%	(73)	47%	(76)
Fork or spoon	45	(20)	65	(34)	44	(16)	66	(40)
	(Proportion who used fertilizer)							
Eat with hands	11%	(77)	13%	(73)	10%	(73)	14%	(76)
Fork or spoon	19	(20)	26	(34)	3	(16)	23	(40)

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TABLE 26. INCIDENCE OF HOSPITAL AND CLINIC VISITS IS SIMILAR FOR ALL AGE GROUPS

Have you ever been to a clinic or a hospital?	20-29 (41)	30-39 (80)	40-49 (85)	50-59 (68)	60 or over (57)
No, never	31%	31%	36%	37%	41%
Yes, for treatment	39	44	39	31	31
Yes, for other reasons	29	25	25	32	28

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If the responses reflect primarily the need for medical care, women who bear children have a greater need for medical care than men, and one would therefore expect hospital use to be higher among women than men. But again, thus hunch is not clearly borne out by the results.

TABLE 27. INCIDENCE OF HOSPITAL AND CLINIC USE IS SIMILAR FOR MEN AND WOMEN

Have you ever been to a clinic or a hospital?	Women (90)	Men (243)
No, never	41%	35%
Yes, for treatment	31	39
Yes, for other reasons	28	26

There is, then, reasonable justification for inferring that reported use of clinics or hospitals reflects predisposition to use modern health facilities and not simply a need for medical care.

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Economic Level

Although higher economic level was linked to the principal agricultural innovations, it is not related to use of hospital or clinic facilities.

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Literacy

On the other hand, just as literate persons were more disposed to use the major innovations (p. 19), in the same way those who can read and write report a greater incidence of hospital or clinic use.

The motor users formed a group with higher economic level, greater literacy, higher acceptance of urban ways of life, more frequent exposure to mass media, broader social contacts within the community, and greater use of credit facilities. Illiterate farmers might also be motor users, if their contacts with urban centers were extensive.

5. Acceptance of mushroom culture was a special case of agricultural innovation: a) as distinct from all other attitudes toward innovation, mushroom growers were not marked by their high positive attitudes toward mushroom culture; b) the investment in mushroom raising per se was less than the investment and risk required by other types of agricultural innovation.

6. The mushroom growers as a group distinct from non-mushroom growers were more literate and acceptive of urban ways. Tilapia raisers were of a higher economic level and had greater community contacts than non-tilapia raisers.

7. An hypothesis was offered: that innovations differ in complexity and investment of effort required. The more complex presuppose greater investment, work, risk and postponement of returns; hence this complex kind requires greater motivation than the simpler ones such as mushroom raising.

8. Use of hospital and clinic facilities was more frequent among the literate, those exposed to mass media, those accepting of urban ways and those having greater contacts with the city. Unlike acceptors of agricultural innovations, users of modern medical facilities were not of a higher economic level than non-users and could not be clearly distinguished on the basis of breadth of contact within the community or use of credit facilities.

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7. I understand that, since the last war, there have been, around here, some introductions of new things in the field of rice farming, other farming, gardening, and fishing in order to raise production. What are these various new things?

1.	Fertiliser	9	[177]*
2.	Small engine	4	[178]*
3.	New rice seeds	3	125
4.	Tilapia	98	[241]
5.	Other fish, specified	13	[402]
6.	Fish, unspecified	80	[243]
7.	Mushrooms	45	[228]
8.	Poultry	179	[244]
9.	Pigs	21	[235]
X.	Other, specify	68	[231]
0.	Unascertainable	45	

8. Here, some farmers got a lot more rice from one rai of land than others got. Generally speaking, what are the various reasons why this is so? [243] [433]

1.	Fertiliser	59
2.	Skill of the farmer	63
3.	Quality of the soil	65
4.	Irrigation facilities	125
5.	Type of seed	17
6.	Other reason, specify _____	53

9.a. When was it more profitable for you to grow rice, this year just finished, or two or three years ago? [243] [434]

1.	This past year	131
2.	No difference	57
3.	2 or 3 years ago	62
4.	Unascertainable	25
—	Does not apply	58

b. If 2-3 years ago: If this is so, then it has become less profitable to grow rice. Such being the case, have you done anything to improve the income of your family?

7.	Yes	36
8.	No	25
9.	Unascertainable	1

c. If yes: what various things have you done?

5.	Nothing	4
6.	Mushrooms	6
7.	Poultry	8
8.	Fish (Incl. Tilapia)	5
9.	Fertiliser	
X.	Other, specify _____	25
Y.	Unascertainable	2

10.a. Do you own a small engine motor, or not? [402]

1.	Yes	70
2.	No	259
—	No Answer	4

16.a. ASK ONLY FARMERS: This year just now beginning, will you do anything for increasing your income, outside of rice farming? [125] [434]

3.	Does not apply	13
4.	Yes	162
5.	No	107
6.	Unascertainable	11

b. IF YES: What various things will you do? [224] [235] [228] [241]

0.	Nothing	3
1.	Mushrooms	42
2.	Poultry	51
3.	Fish (Incl. tilapia)	10
4.	Fertiliser	2
5.	Other, specify_____	84
6.	Unascertainable	6

17. ASK ONLY FARMERS:

a. Last time you planted rice, how many rai of rice did you plant? [243] [433]

1.	4 rai or less	14
2.	5 to 9 rai	25
3.	10 to 19 rai	49
4.	20 to 29 rai	65
5.	30 to 39 rai	53
6.	40 to 49 rai	32
7.	50 to 59 rai	19
8.	60 to 69 rai	14
9.	70 to 79 rai	2
X.	90 rai or more	—
0.	Unascertainable	20

b. And what was the total yield?

1.	120 tang or less	15
2.	121 to 300 tang	28
3.	301 to 600 tang	59
4.	601 to 900 tang	59
5.	901 to 1200 tang	56
6.	1201 to 1500 tang	25
7.	1501 to 1800 tang	10
8.	1801 to 2100 tang	10
9.	2101 to 2700 tang	7
X.	2701 or more tang	3
0.	Unascertainable	21

c. How about the year before--how many rai did you plant?

1.	4 rai or less	16
2.	5 to 9 rai	19
3.	10 to 19 rai	51
4.	20 to 29 rai	67
5.	30 to 39 rai	53
6.	40 to 49 rai	26
7.	50 to 59 rai	20
8.	60 to 69 rai	13
9.	70 to 89 rai	5
X.	90 rai or more	—
0.	Unascertainable	23

48

125

[787] 22. Have you consulted with a medium frequently, occasionally, seldom, or never?

1. Frequently	7
2. Occasionally	4
3. Seldom	66
4. Never	256

[775] 23. Have you been disturbed by a ghost frequently, occasionally, seldom, or never?

5. Frequently	6
6. Occasionally	8
7. Seldom	55
8. Never	264

[641] 24.a. Excuse me, could you tell me, who is now the prime minister of Thailand? If you know, could you please tell me his name?

1. Correct answer	193
2. Incorrect answer	29
3. DK, cannot recall	111

b. Excuse me, could you tell me, who is now the chief of police of Thailand? If you know, could you please tell me his name?

4. Correct answer	167
5. Incorrect answer	24
6. DK, cannot recall	142

25.a. IF R LIVES IN BC COMMUNE: Who is the district officer in Minburi? If you know, could you please tell me his name?

1. DA, as from Bangkapi	194
2. Correct name of present DO	9
3. Correct name of past DO	—
4. Incorrect name	16
5. DK, cannot recall	111
— No Answer	3

b. IF R LIVES IN KY COMMUNE: Who is the district officer in Bangkapi? If you know, could you please tell me his name?

6. DA, as from Minburi	141
7. Correct name of DO	10
8. Incorrect name	—
9. DK, cannot recall	154
— No Answer	28

[434] [829] [556] 26.a. Throughout the world and here in Bang Chan-Khanno Yao too, it is common among men that there must be some who are rich and some who are poor and some who are neither rich nor poor. How about you yourself? Are you rich, or poor or neither rich nor poor?

1. Rich	2
2. Poor	68
3. Neither	863

b. IF POOR: Here in BC-KY, do you think there are many or few people who are poorer than you?

5. Many	30
6. Few	31
7. Unascertainable	7

235 was slightly higher than that of chickens, averaging 155 eggs per laying duck.

178 231 Hogs: In 1949, two families were raising hogs which according to our observation did not seem to be well fed. When we returned to the village in 1952, not a single hog remained in Bangchan.

Fish

262 443 434 After rice, fish (and other marine animals) are by far the most important ingredient in the diet of Bangchan. More fish are bought from the outside than the very small amount that is exported from the village mainly by one or two very poor families who have availed themselves of this means of augmenting their income.

221 226 The villagers' annual cycle for fish-taking varies somewhat with the particular method used, and with the annual rice and ceremonial cycles: yet the maturation cycle of the principal types of fish is also a factor, and one which tends to give an overall orderliness to the annual cycle for fish in general. There is no time in the year when at least some fish are not available, nor is there any time in the year, even the busiest, when the family does not want fresh fish for its menu. For this reason, there is fishing the year round, at least in the form of the housewives simply setting nets in the canal and then tending them according to some schedule or whenever the noise of caught fish sloshing about in the water is heard. When a lull from the pressure of

178 laboring profession, limiting the work to transplanting only.
592 Apparently she did not earn enough. During this hard period
621 the young boy left her. The woman continued to live alone for two years. After the collapse of her shack in 1953 she went to live with a young couple in KY5 who are not related to her. In exchange for room and board and a nominal allowance, the old woman agreed to take care of the couple's baby.

178 Case 8: In 1949, a couple, both teachers in the Bang-
592 chan Primary School, were sharing the same dwelling with the
895 wife's mother's family, but having a separate food arrange-
• 434 ment for themselves and their two young daughters. Thus,
621 they appeared in the 1949 census as a separate family. In local standard, the combined income of these two teachers
[416] was quite high. The family lived well and was the only family in Bangchan that owned a camera. In the 1953 census this family became a part of the wife's mother's family because they had arranged to share the same food. The reason that was given for this new arrangement was that some time earlier the wife's brother, who had been living with his mother, got married and moved out to start an independent family, whereupon the old lady suggested that her daughter move in to fill the vacancy.

178 Case 9: In 1949, a family of three, consisting of
592 a young couple and their six years old daughter, worked as
621 farm hands for the wife's mother for fixed pay on which they
[593] were able to live independently. Two or three years later, the wife's mother asked this family to move into her household

591 A factor that should also be taken into account was that he
592 had a regular income of 450 baht a month from his job in the
434 Highways Department, which by the village standard was more than enough for him to live comfortably with his second wife.

591 Historical records of the 96 farm operating families do not contain information as to how the 50 families passing through nascent period were divided into those staying with wives' families and those staying with husbands' families. The 1953 census, however, reveals that of 48 married couples then living in 42 families of parents of either side (four such families included two couples and one family three couples), 23 were with husbands' parents and 25 with wives' parents. The proportion may thus be estimated at about one to one.

59 During the nascent period, the couple ordinarily
434 received from the parents they were staying with a kind of
[431] annual bonus locally called lampai which varied according to the economic status as well as generosity of the parents. Lampai took several different forms. Thus, a couple might receive all the paddy harvested from a specified area of the field of three, five, or ten rai; they might be given a fixed quantity of the crop -- say 50 or 100 tang; they might receive cash -- say 500 baht or any other varying amount. In some cases, the couple were expected to earn their lampai outside the family farm after obligation to family work had been fulfilled. This took the form of piece-working or trivial trade.

59 If no lampai was given, the parents might give some gold in
[431]

59 themselves up ; financially to compete with A's parents.

The same informant said further, however, that usually it was up to the couple themselves to decide when to leave the old family. Parents, in his words, "rarely drive the offspring out. They also rarely resist the couple's decision to leave. The most they can do in case labor is badly needed is to ask the couple to stay a year or two longer."

591 484 On the other hand, a second informant, a headman as was the first, indicated that the five-year period he and his wife spent with his wife's parents immediately after their marriage in 1922 was their most prosperous time. As [431] lampai the couple were given the harvest from a 5-rai parcel each year. When he married, he already had five baht weight [426] of gold. With surplus income, he was engaged in lending for interest. Accumulation during their five years' stay with the parents included timber enough to construct the new home when they moved out, one hundred tang of paddy, and forty baht weight of gold.

As a matter of fact, there are several factors that should be taken into consideration in evaluating the advantages and disadvantages of a newly wed couple undergoing the nascent period. These are the lampai arrangement, willingness of the parents to let the couple earn extra income from sources outside the family, current wage rate and job opportunity, and, most important, the current profitability of the farming business which is assumed to be the alternative

591 if the couple do not choose to stay with the parents. In
434 any event, the fact that the couple are more or less free to leave the old family provides an opportunity for the couple to escape all the disadvantages that might be imposed upon them, leaving all the advantages to be acquired.[10] As for those who apparently discounted the merit of the nascent period, the author suspects that they neglected to consider the expected net income from farming and that they were unrealistic in thinking only of wage rate and in underestimating the more crucial problem of job opportunity.

59 In addition to their own wealth accumulated during
431 the nascent period, gifts in the form of farm equipment,
434 paddy and land were usually given to the couple by their parents at the time they left them to establish an independent family. Of 80 separating families (Table 7), however, 17 reported that they received nothing whatsoever from their parents. Among the remaining 63 families that received something, there was a wide variation in the kind and the amount of the gift, ranging from a single buffalo with an incomplete set of farm equipment to 228 rai of rice land with a complete set of farm equipment as well as a stock of paddy to last the new family until the coming harvest. Parental gifts to newly established families are shown in Table 8.

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10. At least two cases were known where the couples, not ready to start a family of their own, left the old families and moved into families of the other spouses.

[TEXT CONTINUED ON PAGE 91]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 8

PARENTAL GIFTS TO 63 NEWLY ESTABLISHED FAMILIES
Bangchan, Thailand, 1909-48

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Items	Number of Families Receiving	Range of Individual Gift	Total	Average for Those Receiving
F. implement*	63	1 set	63 sets	1 set
Buffalo	47	1-4 heads	73 heads	1.5 heads
Land	37	6-228 rai	1112 rai	30 rai
Paddy stock	32	40-1000 tang	4495 tang	140 tang
Building	12	1-2 bldg.	16 bldg.	1.3 bldg.
Cash	4	80-400 baht	760 baht	190 baht
Boat	3	1 boat	3 boats	1 boat
Gold	2	2-20 baht**	22 baht**	11 baht**

* Only basic items were included -- plow, harrow, sickle, etc.

** One baht weight of gold is equivalent to fifteen grams.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

CHAPTER III

COMMUNITY ECONOMY

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Occupational Structure in Bangchan

At the completion of the 1949 census, by which time we had spent nine months in the village, we categorized Bangchan's 288 families primarily on the basis of the principal source of income of the family head. Though the categories derived suffered from some overlapping and ambiguity, we found them useful for survey and other purposes. The descriptions of each occupational category, as found in Tables 9, 10 and 11, appear on pages 111 through 113 of the primary report.[1] As they will be constantly referred to, they will be summarized here:

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1. Farm operator. Main income from growing rice on his own or rented land.

2. Farm laborer. Main income from working on local farm operators' farms, as regularly hired laborer for an entire rice season or at casual farm jobs for which wages are contracted on the basis of piece-work or days worked, for example, transplanting or harvesting rice, digging ditches, or deepening fish pools. Some families in this category supplement their real income with rice which they cultivate

1. Sharp, Hauck, Janlekha, and Textor, op. cit., pp. 111-13.

[TEXT CONTINUED ON PAGE 98]

*243
434 on a small plot that they own or rent, but all families
463 in this category derive their main income from wages.

3. Trader. Main income from the more or less regular sale, not production, of rather considerable amounts of goods. Perhaps somewhat arbitrarily, we have not included in this category those very few families who derive their main income from production of cookies or the like, even though such families might themselves perform the selling of their products to local consumers; such families are included in the 'home enterpriser' category below.

[426] 4. Investor. Main income from land rent, interest
[427] on loans, and/or speculative gain.

5. Professional. Main income from such specialties as midwifery or dramatic entertainment.

434 6. Public servant. Main income from, or majority of
647 working time spent in, government employment. This is the
463 only category in which we had to add the additional criterion of "majority of working time"; government pay is rather low, and one person who works full time in the employ of the government actually receives more income from other sources.
[875] This category includes regular government officials, teachers
[622] and school janitors. The hamlet headmen are not included, however, as their main incomes are otherwise derived and their remuneration from the government is extremely low. They maintain no daily routine as public servants. The headmen are all farm operators, except one who is an investor.

434 463 7. Home enterpriser. Main income from food or handicraft articles produced at home.

434 792 463 8. Priest or novice. Though priests and novices do not receive salaries or wages, their maintenance, which comes from the temple and directly from the people in the form of contributions, is their main income. This category includes only permanent priests and novice personnel. Excluded here are all residents who enter the priesthood more or less perfunctorily for just a few months. Since sexual abstinence is demanded of all monastic personnel, no wives or offspring are found in this category.

434 9. Miscellaneous. The main income source for the eight families in this category is obscure. The heads of these families are not known to have any steady occupations.

178 463 621 Table 9 shows the occupational distribution of Bangchan families as of 1949. It may be observed that some of the figures in this table differ slightly from those reported in the preliminary study previously cited. This is because errors such as duplications and omissions in the original census have been detected and corrected.

Table 10 shows the same distribution as of 1953, and Table 11 the change in the occupational structure of the village that took place during the four intervening years. In 1949, 80 per cent of Bangchan families were farm operators. Four years later, the figure was reduced to 73 per cent. While there was no percentage change in the figures for public servants, miscellaneous, and priest or

178 novice; there were noticeable increases in those for farm
463 laborers and traders, and a slight increase in that for
621 investors, which were offset by a marked decrease in figures for farm operators and slight drops in those for the professional and home enterprisers. In order to understand these changes in the occupational structure of the village, more information on some of these occupation than that given in our operational definitions at the beginning of this chapter is necessary.

*243 Farm operation is a traditional way of life in the
• 434 village. The primary motive is to secure enough rice for
463 consumption. A secondary motive is to have cash from sale of surplus rice to buy goods that are not produced locally.

*243 Farm laboring as a profession is limited to the poor.
464 Farm laborers, occupying the lowest status in the village,
554 are the most unstable and socially disintegrated group.
621 They are not fully employed even during the work seasons
463 of the year because there are too many of them in the locality. Thus, they exist in the village not because of demand for their work but because they have no opportunity for other occupations.

621 There were twenty-one families that were classified
463 as traders in 1953. Of these, nine were permanent store-
443 keepers, and twelve were peddlers selling food stuffs from door to door. Stores were situated at strategic places in the village -- two at the crossing of Minburi Road and Bangchan Canal which is the natural entrance into the village,

443 she wanted to spend more time collecting debts."

It should be noted that A's brief duration of peddling started in the harvesting season. During this time the village cash supply was high, resulting in demand for such a delicacy as pork which normally constituted a negligible fraction of the diet of Bangchan people. This is a good business period for the peddlers. Another good business period, although not as good as the harvesting time, is in the transplanting season, when farmers are too busy to procure their own food (by fishing). In this latter period, farmers are not particular about food, and "anything eatable sells, provided liberal credit is allowed" for people have neither time nor money.

It should be noted also that many smaller peddlers did not go to Bangkok as did Nang A. The small peddlers, who operated on a very limited working capital, had to sell their eggs to larger peddlers at discounted prices. Our records show that only three or four peddlers took regular trips to Bangkok.

Five families were classified as investors in 1953. All these families lived on rents from land, interest on loans, and income from speculative sources such as buying paddy when the price was low and selling it at high prices. Actually, most of these five families were not among large land owners in the village. Their combined land was only 134 rai, averaging only 27 rai per family and ranging from 10 to 76 rai. This is a small acreage in comparison to

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

427 the combined land of five leading farm operators of 693
434 rai, averaging 139 rai per operator and ranging from 83
454 to 235 rai. It must be remembered that our operational
621 definition of occupations was based on the main source of
463 income and that many of the villagers had more than one
426 source of income. Investors as an occupational class in Bangchan should not be pictured as large landlords and large money lenders, possessing financial influences over their tenants and debtors. Rather, they were humble fellow villagers whose incomes were mainly derived from rents of small parcels of land or interest on small loans. To cite an extreme case, one aged woman was classified as an investor. She had only 17 rai which she rented out to her own son. She was living alone in an old shack and was too old to do any kind of work. She received as rent about a hundred tang of paddy a year which is equivalent to an annual income of only 800 baht. Thus she was considered one among the poor in the village.

198 There were three families whose occupations were
463 classified as professional in 1949. The number was reduced
621 to one in 1953. The head of this family was a Chinese car-
322 penter who derived his income primarily from boat building. Again, it must be pointed out that reduction of the number of families primarily engaged in professional services does not mean that professional services had been declining.
[305] On the contrary, they had been increasing. There were three barbers in 1953 as against only one in 1949. More traditional

178 463 621 doctors were practicing in 1953 than in 1949, while there was no change in the number of midwives. In most cases, however, these professional services had ceased to be the main sources of income of the families engaging in them.

621 434 463 647 [875] In 1953, occupation defined as public service included the jobs of an educational supervisor, one teacher, two school janitors, two workers in the government-owned Bangkok wharf, and one policeman. Actually, there were five Bangchan residents who were teaching in 1953. Only one of these, however, was a family head. Two of the other four teachers were husband and wife living with the wife's mother who was classified as an investor -- the most prosperous of the investors mentioned earlier in this section. Another teacher, a wife, was also living with her mother who was also an investor. The last teacher, also a wife, was living independently with her husband who was operating a rice farm, and the occupation of the family was thus classified as farm operating. With the possible exception of the policeman, all these public servants were well paid in the village standard, ranging from some four hundred baht a month for a janitor to eight hundred baht for the educational supervisor. After the 1953 census was taken, more regular jobs were opened to Bangchan residents by the Highways Department, and also more people took up regular jobs of a public service nature in Bangkok while retaining residence in Bangchan by commuting daily between the village and their offices. Thus, [178] although the percentage figures remain constant during

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434 1949-53, in actuality public service as an occupation is
463 increasing in Bangchan.
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There were four home enterprisers in 1949, mostly engaged in making cookies. As in case of the professional, this activity still existed in Bangchan, but by 1953 it had degenerated into a secondary income, leaving the lone case of basket making in the home enterprise category.

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285 Only one family head was classified in 1953 as a home-enterpriser. The family was engaged in making takraw -- a cane utensil used in picking mangoes from the tree. On January 27, 1953 we met A, the head of this family, who was taking 103 takraws of various sizes to sell in Bangkok.

[435] A gave the amounts and prices of these takraws as follows: 56 large size, @ 3.00 baht; 31 medium size, @ 2.50 baht; 16 small size, @ 2.00 baht. A said he and his wife worked on these 103 takraws alone, and finished them in twelve days, using 50 baht worth of materials including cane, wood, and binders. Ordinarily, they started making takraws in December and continued through May. They were able to make about 3,000 baht within this period. They also made other things like baskets, but takraws were their main source of income. In rice growing season, they also did some piece working. They did not operate a farm. Piece working and basketry during rice growing season brought them a combined income of about 2,000 baht. The amount of each kind of

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463 basketry they made was not as constant as takraws. It depended more on which paid best. Their total annual income

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

434 amounted to somewhere around 5,000 baht, which was about
469 four times as much as the labor earnings of an average rice
621 farm operator as we shall see later.

178 The present occupational situation and accounts of
463 the changes in the past few years alone may not be enough to give us a complete picture of occupational development since the beginning of the history of Bangchan. Fourtunately, however, since settlement in the village in a considerable scale took place only some eighty years ago, evidence from genealogical studies has provided us with ample materials on which a reconstruction of the past development may be made.

[175] When Bangchan was being settled in the 1870's, as a probable consequence of the increasing national and international demand for rice and the revolutionary change in Thai society, every family was naturally a farm operator family. As long as there was land available for clearing, opportunity would be open for every new family, either branching off from the old ones or moving in from the outside, to operate a rice farm.

(161] Eventually, population grew up to a size large enough
(194] to support a temple in 1895. Population growth and the
[196] emergence of a village center at the temple prompted occupational specialization. At the beginning, investing, trading, professional servicing, and home enterprising probably took the forms of secondary occupations, while farm operating remained the primary occupation throughout. In time, these secondary occupations became more and more specialized and

178 finally, for a few families, took precedence over rice
463 growing. The relative importance of these new occupations remained low, however, since only a few families were needed to meet the village requirements for such services.

• 434 The establishment of the primary school some thirty
647 years ago opened up new jobs as teachers and janitors for
875 some educated villagers who were given preference over out-
[372] siders. It should be noted, nevertheless, that at the beginning the primary school teachers were not considered as regular officials and their pay was as low as six baht a month during the prewar years. Even during the war, they did not get as proportionately large a cost-of-living raise as did other regular officials. It was only after the war that they were made regular officials and that their pay rose almost a hundred times to 450 to 550 baht a month with provision for a steady raise to more than one thousand baht
[48] a month. This new occupation in public service also increased with the extension of the central government employment into the rural areas and with improved transportation facilities which permitted an individual to commute daily between his office in Bangkok and his home in Bangchan. Thus, a Bangchan resident is now serving as an educational supervisor in the nearby Minburi District and a few others are on the regular payroll of the government-owned Bangkok Wharf.

• 243 With the background knowledge of the situation of
464 Bangchan farm laborers previously described in mind, we may
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per cent in 1949 to thirteen per cent in 1953 suggests that the problem of population pressure on land has become more acute, although it may also indicate changes in the cost structure of rice production which will be discussed in Chapter VI.

Concluding the discussion of this section, we may say that rice growing is the core of the occupational structure of Bangchan around which other occupations rotate. It is not uncommon that one family has several occupations, and in addition to income from these most families get "free" food in the forms of fish and uncultivated aquatic plants. This is the principal reason why families with apparently no cash income still thrive.

It is conceivable that in years of poor rice crop the family put more effort in the secondary occupations; when such an attempt does not work out well -- for example, no work for manual labor and no capital for trivial trade -- an effort is made to obtain subsistence directly from nature.

In any event, every family in the village is engaged in fishing in varying degree. It is because of this fact coupled with the fact that the village fish supply is decreasing that the problem of fish conservation is very important.

Finally, the dynamic nature of rice farming, with varying efforts on getting extra jobs and securing free food outside the farm depending upon the increase and decrease of the rice crop, suggests that the economy of any rice

Rice Production

*243 433 • 434 Rice is the single major crop of Bangchan. As of 1953 eighty-five per cent of Bangchan families derived their main source of income from rice production either as farm operators or as farm laborers (Table 11). Furthermore, rice was grown not only by farm operator and farm laborer families but also as a side line by families reporting other occupations. In Bangchan, as in all other rice growing villages, it can be said that rice is the source, direct or indirect, of income for every family. As earlier mentioned, rice growing is the core of the occupational structure around which other occupations rotate.

Table 14 shows that the village average yield, computed from crops of a sample of 96 rice farms during 1949-52, was 28.8 tang per rai.[3] On the basis of this figure, the village total rice crop from 6,722 rai of land worked by Bangchan residents in 1953 may be estimated at 193,594 tang or about 2,130 tons of paddy.[4]

*243 433 In order to determine rice surplus in Bangchan, village rice consumption must be computed first. There are three principal uses of paddy -- as human food, poultry feed and as seeds. The village paddy consumption is shown in Table 15.

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3. See Chapter IV for the sampling technique.

4. One tang of paddy grown in Bangchan weighs approximately eleven kilograms.

[TEXT CONTINUED ON PAGE 122]

Other Food Production

235 433 Other food products which are produced in a considerable amount in Bangchan include chicken eggs, duck eggs, and fish. To a lesser extent, fruit and vegetables are also produced locally.

Practically every family in Bangchan raises chickens, and half raise ducks. In April, 1949, the author conducted a poultry survey covering 46 families whose homes were on the banks of Bangchan Canals. Of these, 45 families were found to be raising chickens and 23 families raising ducks.

Of 45 families raising chickens, 38 families from which data were available reported rates of egg production showing that for these families 53,750 eggs were produced annually from 376 laying hens, averaging 143 eggs per hen. [146] [438] Of 31 families who gave information about sales, five consumed all 2,260 chicken eggs produced; the other 26 families sold 31,040 eggs and consumed 5,590. The proportion of consumption to sale was thus 7,850 to 31,040 or approximately one to four.

There were 393 laying hens in the yards of 45 families, averaging 8.6 hens per family. Chicken egg production [434] was estimated at 1,230 per family. Assuming that four-fifths of these were sold at three for one baht, which was the local price in 1949, average cash income for these families from sale of chicken eggs was estimated at 326 baht annually. [435] With a higher price in 1953 of fifty satang a piece, the estimated income from sale of chicken eggs rose to 492 baht per family.

235 Of the 46 families covered by the survey, 23 or one-
433 half raised ducks with an average annual production of 155
434 eggs per duck, and an average of 11.7 ducks per family raising them. Egg production for each of these families thus averaged about 1,800 per year. Of these, 1,350 were consumed by the family and 450 sold at the same price as chicken eggs. It was estimated, then, that from duck eggs alone, the average cash income in 1949 was about 150 baht per family raising ducks.

226 After rice, fish were by far the most important
262 ingredient in the diet of Bangchan. In contrast to poultry,
433 however, fish did not constitute a source of cash income of
[434] the villagers. As a matter of fact, more fish were bought from the outside than the negligible amount that was exported from the village mainly by one or two very poor families who had availed themselves of this means of augmenting
[435] their income. From our consumption study of 106 families in 1953, it was found that of an aggregate amount of 17,786 kilograms consumed by these families in the previous year 16,027 kilograms were caught by the families while 1,759 kilograms were bought at five baht per kilogram. The rate of fish production may thus be estimated at 151 kilograms annually per family, or 44,998 kilograms for the entire village.

262 The same consumption study shows that the 106 fami-
244 lies consumed in 1953 a total of 18,402 kilograms of vegetables
433 all of which were produced or acquired by the families,

243 parcels by siblings who failed to include their share in
423 those parcels in the reporting of areas owned. For want
427 of a proper basis for adjustment, we chose to let the figures
128 stand as they were reported.

Table 19 shows that the combined area in rice of all the 216 farms in Bangchan was 6,638 rai, or almost 99 per cent of total area planted to rice by the residents, the balance of 84 rai being worked on by residents whose occupations were those other than farm operating. Of these 216 farms, 48 were classified as all owned, 88 part owned, and 80 all rented.

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184 The conventional system of classifying farms accord-
423 ing to land tenure into all owned (owner-operator), part-
554 owned (part-owner), and all rented (tenant) should not be
427 used without modification as a classification of economic
128 or social status in population pressure areas where an efficient size farm is usually an exception rather than a rule. In these areas, it does not hold, as it seems to imply, that an owner-operator has a superior economic status than a part-owner and that a part-owner is still in a better eco-
[434] nomic position than a tenant. There is a wide range in size of farm operation and hence of incomes within these categories.

Within the category of owner-operator, there are major differences in size of operation and hence economic and social status. If a farmer -- to cite a specific case, Farmer A in BC4 -- owns the large area of rice of 235 rai,

[TEXT CONTINUED ON PAGE 133a]

Rent of Rice Land

*128 178 427 Tables 24 and 25 show different rental methods in 1948 and 1952. Figures in Table 24 were obtained from our records of the sample of 104 farms in operation in 1948, and figures in Table 25 were obtained from the same sample reduced in 1952 to 96 farms which had been continuously in operation until then, the other eight farms having ceased to operate by 1952.[8]

427 *243 178 It is seen that with the exception of a single case of share-cropping there were two rental methods in 1948, in kind and in cash, the proportion of areas involved being fifteen rai of rent in kind to every rai of cash rent. In 1952 rental methods remained more or less the same, consisting principally of rent in kind and cash rent, the proportion of areas involved being slightly increased to nineteen rai of rent in kind to every rai of cash rent.

*243 178 427 435 There was, however, a rapid rise in rent rates within this period of four years. It is seen that the average rate of 6.2 tang per rai in 1948 has risen to 8.1 tang per rai in 1952, an increase of 31 per cent in four years.

[433] It is interesting to note that an increased rent rate was charged in spite of the decline in yield of 32.1 tang per rai in 1948 to 25.2 tang per rai in 1952, or from the record crop index of 111.4 in 1946 to 87.5 in 1952 (Table 14).

[434] Another equally interesting point is that the increase in rent rate was charged in spite of the increases in the

8. See Chapter IV of the sampling technique.

[TEXT CONTINUED ON PAGE 143]

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*243
178 other items of cost of producing paddy -- in other words,
427 in spite of a decline in profit (a great decline when a
• 434 reduced yield is also considered). In the preliminary study
435 in 1948-49, it was found that the average cost of producing a tang of paddy was 5.86 baht, all costs included except value of operators' labor.[9] When the value of the operators' labor of 1,000 baht for those operating ten rai or over and of 500 baht for those operating less than ten rai was included in the calculation, the cost of production was found to be 6.76 baht per tang, including 1.52 baht for rent, 3.46 baht for labor (values of operators' labor and family labor included), 0.38 baht for seeds and materials, 0.65 baht for depreciation, and 0.75 baht for interest on investment. As we shall see in the section on cost of producing paddy in Chapter VI, an estimate of cost using the 1952 prices, for time and opportunity did not permit a second cost of production study during our second period of field work in 1952-53, points toward an increase in every item of the cost of producing paddy in Bangchan.

An explanation for this abrupt rise in rental of rice land in Bangchan lies in the nature of the demand for and supply of rice land. Although rents may be surpluses

*[128]

9. Sharp et al, op. cit., p. 171. In this preliminary study, the cost of family labor was imputed (at going wage rate) from labor requirement based on acreage, the cost of the use of the operator's own land was imputed from going rent rate, and the depreciation cost was calculated by dividing the original cost of equipment by their respective expected length of service.

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*243
178 from certain points of view, or for certain purposes, or
427 subject to certain interpretations, they are to the indi-
434 vidual producer no different from any other money expense.
435 They do not arise as a surplus from his own operations;
they are a cost rigidly imposed upon him by the competition
of his rivals for the use of the rent-yielding property.
They figure in the same way as do wages of labor and the
interest of capital in his computations as to the most ad-
vantageous proportion between the factors and as to the most
*[128] advantageous scale of operations.[10] Naturally, we are now
dealing with contractual rent, which is the actual sum paid
by the tenant to the landlord for the use of the land, not
the hypothetical economic rent of the classical economists.

*243 The preliminary study revealed that there was in
464 1948 under-employment on some Bangchan farms in terms of
rai worked per worker. This was shown by comparing the
number of rai worked per worker on 94 farms employing no
hired laborer with the number of rai worked per worker on
*[128] 10 farms employing one or more hired laborers. On the farms
where only family labor was used, the figure was 9.4 ad-
justed rai per worker; while on those farms which used
regularly hired laborers along with family labor, the figure
was 13.4 adjusted rai per worker. (Each rai of transplanted
rice was counted as one adjusted rai, while each rai planted
by the less-labor-requiring broadcast method was counted as
one-half of an adjusted rai.) An assumption was made that

10. Edward Chamberlin, The Theory of Monopolistic Competition (sixth edition; Cambridge: Harvard University Press, 1950), p. 22.

*243 As long as farm under-employment prevails and as
• 434 long as limited opportunity for an alternative occupation
464 is open to farm operators and farm laborers, we have reason to believe that the demand for rice land is rather inelastic. Another important factor contributing to this belief is the operator's concept of cost of producing paddy which seemed to include only explicit rent (actual amount paid to the
[435] landlord) and cash operating expenses. Thus, while our calculation shows that the cost was 6.76 baht per tang or 215 baht per rai in 1948, the figure would be only 1.71 baht per tang or about 55 baht per rai according to the operator's concept of the cost.

*243 Under the conditions of farm under-employment, a
427 tenant, part-owner, or even owner-operator is willing to
464 pay high rent for an additional parcel because a larger
178 worked area would cost him only the additional explicit
435 rent and a small increase in seeds and materials. Unless the extra rented parcel is so large that extra labor must be sought outside the family, he does not have to pay any explicit wage at all for rice production in this additional parcel. Landlord-operators, on the other hand, are under a different situation, for they may rightly be considered land saturated and fully employed. Hence, the individual demand for working land on the part of a landlord-operator is relatively more elastic than those of the other farm oper-
*243 ators. As rent rose from 6.2 tang per rai in 1948 to 8.1
427 tang per rai in 1952, it was observed in Table 26 below that
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[TEXT CONTINUED ON PAGE 148]

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427 Inelasticity of supply for land among land-thirsty operators also varies with different sub-group (tenant, part-owner, or owner-operator) depending upon the degree of land thirst. Thus, supply for land among the tenants would be more inelastic than that of part-owners, and supply for land of part-owners would be more inelastic than that of owner-operators.

427 434 Landlord-operators, on the other hand, are sensitive to changes in rent rates which directly affect their incomes part of which are derived from rents. Although they will have to offer all of their lands either to themselves or to others, the proportions offered vary according to rent rates. If rent is low, they may increase their own working areas for the reason that incomes deriving from farm operation may be higher than prospective incomes from renting out the same parcels. If rent is high, they may reduce their own working areas since they may figure out that incomes from renting out those parcels are higher than the prospective incomes deriving from working on them. It is due to this capacity to adjust the proportion of working area and area rented out that landlord-operators' bidding power may be considered very strong. Other local landlords who are non-operators do not have this same capacity to increase or decrease areas offered for explicit rent. If rent is too low and they want to operate their lands instead of renting them out, they are still not as ready to do as the landlord-operators who already have the facilities for farming. The

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427 neighboring landlords are under the same situation as the
• 434 non-operator landlords. Yet these two groups are in a better position than the absentee landlords, for they are already in the locality. They are used to farming, and at least they do not have to invest on housing if they should choose to operate their own lands instead of renting them out at low rent.

427 [435] It was observed in the preliminary study that rent rates charged by local landlords were higher than those charged by the absentee landlords, the former ranging from six to eight tang per rai while the latter was only five tang per rai.[13] The discrepancy was assigned to the fact that local landlords were in a better position to sense the competition for land among farmers desirous of obtaining more land than were landlords who lived in the city. Local landlords were thus quicker to adjust rent rates to their own benefit.

Another advantage of renting land from absentee landlords was pointed out by a Bangchan tenant who said that he preferred absentee landlords to local landlords. "If you don't want to pay too much rent," said he, " you may report to the absentee landlord that you got a poor crop even though it was the best crop you ever had. You cannot do so with a local landlord, for he knows as well as we know by a glance at the parcel how many tang of paddy we are going to get." "Besides," the man continued, "local landlords often make request after request for your free

13. Sharp et al., op. cit., p. 148.

427 labor which is rather difficult to decline. There are many occasions for such request, for example, draining a pond, clearing a garden, and building and dismantling a house."

So far the arguments seem to point toward the relative leniency of absentee landlords. Condemnations of absentee ownership of land would seem, therefore, to fall wide of the mark from an equity standpoint. There is still another important point, however, that should be considered. Although we do not at present have accurate supporting data, our impression was that rents of rice land do not constitute a significant part of absentee landlords' income while they were a major consideration of the local landlords. If this impression is true, two diametrically opposite ramifications seem to follow. First, absentee landlords accept rents as they come to them and the rents tend to be lower than those accrued to local landlords' land. Second, since some absentee landlords can afford to offer their land at high rent at the risk of having no tenant to work on their land, the rents charged by these absentee landlords tend to be high. In this latter case, high rent rates on absentee landlords' land will induce a raise in the general rent rates in the village. We are now confronted with a rather difficult situation, for the actual outcome seems to depend entirely on the individual compunction of the absentee landlords.

427 Stories about both kindness and maliciousness of absentee landlords were heard in the village. On the one hand, they were looked up to as the people whose help can

427 author's father who gave this man an initial capital of 600
556 baht when he made his start in Bangchan some thirty years ago. He is now a millionaire and a father-in-law of a former top military officer.

427 Again it is the author's impression that, from the viewpoint of the villagers' best interests, the good side of absentee landism seems to outweigh the bad side.

427 Going back to the forces of demand for and supply of
434 rice land, it should be noticed that, as was so often the
435 case, free competition in the classical economist's sense did not exist in Bangchan where rents were often sticky. There was a wide range of different rent rates for fields of almost homogeneous nature as far as agronomic properties were concerned. Preference for prospective tenants was observed to have a personal rather than economic basis even on the part of the local landlords who were found to be most sensitive to rent rates. When a new higher rent rate was to be charged, it was observed that the most plausible excuse had to be found and presented to the tenants by the landlord. An example was the general raise of rent in 1953 when the new land tax was raised from 0.30 to 4.00 baht per rai, whereupon most local landlords immediately raised their rent from seven tang to eight tang per rai. One tang of
[451] paddy, however, was worth nine baht. It is seen, thus, that as a result of an increase of the government revenue of 3.70 baht per rai the local landlords also received an extra 5.30 baht per rai from their tenants who alone had to suffer an increase cost of nine baht per rai.

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423 our informants, the insurance company owned hundreds of
435 rai of land in the vicinity. By spending only 20,000 baht
456 in boosting up land prices, the company thus set the stage
178 for making a large profit through sale of their own land
367 at inflated prices.

178 While the increase in land prices in Zone 1 was
429 attributable to the sudden assumption of residential land
435 prices, this explanation does not apply to the increases in land prices in the other zones which have remained agricultural throughout. Although less spectacular than the case of Zone 1, the rise in land prices in these six zones was also quite abrupt, averaging 560 per cent for the five-year period from 1948 to 1953 (Table 28).

429 Capitalized valuation of these farm lands (Zones
434 2-7) may shed some light on the situation, although there
427 is limitation especially to the cost concept. There are two ways by which a capitalized value of farm lands may be obtained: (1) by capitalizing income from the farm operation left after payment of all factor costs except land, and (2) by capitalizing income deriving from explicit rent of the land.

243 Receipt from one rai of rice land in 1948 may be cal-
435 culated from the crop of 32.1 tang at 252 baht, using that
434 year's average farm price of 7.86 baht per tang of paddy.
423 When the cost, including an imputed return to all labor but
427 excluding rent, of 166 baht per rai is deducted, a residual return to land of 86 baht per rai is obtained for the year.[15]

15. For want of sufficient data, it is assumed that the cost items other than rent remain the same.

243 In 1953, figure for the size of the crop was not
423 available, but we may use the 1948-52 average of 28.8 tang
434 per rai. With the year's farm price of 9.00 baht per tang,
435 receipt may be calculated at 259 baht per rai. Using the
427 same cost, again excluding rent, of 166 baht as in 1948, a residual return to land may be estimated at 93 baht per rai.

Capitalized value of land may be calculated from the formula $v = \frac{a}{r}$ where 'v' stands for capitalized value of land, 'a' for income from the land, 'r' for the rate of interest prevailing in the locality.[16]

When the calculated residual return to land is used, the capitalized value of farm land in Bangchan (Zones 2-7) is found to be 573 baht per rai in 1948, and 620 baht per rai in 1953. When income deriving from explicit rent is used in the calculation, however, the capitalized values become 327 baht per rai in 1948 and 487 baht per rai in 1953.

178 It is interesting to note that capitalized values of
423 land computed from these two different types of income were
434 closer to each other in 1953 (487 baht computed from income
427 deriving from explicit rent as against 620 baht computed
435 from the calculated residual return to land) than in 1948 (327 baht computed from income deriving from explicit rent as against 573 baht computed from the calculated residual return to land). In other words, landlords are now receiving a larger proportion of the residual after payment of all

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[426] 16. The rate of interest of 15 per cent per year is used. This is the minimum going rate with security. Without security, the rate may be as high as 30 to 50 per cent per year.

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factors, except land, at the going rate of return. A more interesting point to note is that the capitalized value of land in 1948 (327-573 baht per rai) was substantially higher by either method of calculation that the average price of farm land in that same year (240 baht per rai), while the capitalized value of land in 1953 by either method of calculation (467-620 baht per rai) was far below the average price of farm land in that same year (1,583 baht per rai).

The situation in 1953 indicates that the price of farm land in Bangchan has been bid up too high. The stickiness of rent rates in the locality mentioned earlier together with the fact that landlords are now receiving a larger proportion of the residual after payment of all factors, except land, at the going rate of return have led us to the belief that the proportionate share of the landlords will be increasing in the near future.

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Remunerations for Farm Work

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• 434 At the beginning of this chapter, four groups of farm workers were mentioned -- the farm operators, family workers, hired laborers, and piece-workers.

The farm operator receives his remuneration for the farm work mainly in the form of farm income, which is the difference between total farm receipts and total farm expenses. It is the reimbursement of the farm operator and owner of the capital for labor and management and the use of capital.

There are several other ways of measuring the operator's remuneration. Net cash return, for example, is the difference between cash farm receipts and cash farm expenses. Here, increase and decrease in inventory are not considered, and neither is the unpaid labor. Averaged over a long period, the difference between farm income and net cash income due to including inventory items in one and not in the other would tend to disappear.

Two most widely used measures of the operator's remuneration, however, are labor income and labor earnings. Labor income is what a farmer receives for his year's work after paying all farm business expenses and interest on the capital invested, and in addition he has a house and farm products used in the household. Labor earnings is labor income plus the value of housing privilege and farm products used in the household.

In the American experience, it is rather difficult to estimate the value of farm products used in the farm

243 household. Although labor earnings is a truer measure of
434 a farmer's return, it is less widely used than labor income because no such estimation is involved in this latter measure and because prequisites are much less important in the United States. On Thai rice farms, however, it is not as difficult to estimate the value of farm products used in the household because generally only one kind of farm product -- rice -- is involved and the consumption of rice, although in large amount, can be precisely determined. To a much lesser extent poultry products may be used, but it is also fairly easy to estimate.

583 In theory, the remuneration for family workers'
465 effort is imputed at the going wage rate on their actual contribution in the farm work, when labor earning is calculated. In practice, however, Bangchan family workers receive in addition to board and lodging a certain amount of cash from their family head who is also the farm operator and who pays this amount from farm net cash return. The amount an individual family worker receives varies according to individual need and often to the whim of the family head. To be sure, there is no such thing as a fixed allowance because yearly fluctuation of farm income does not permit
593 such arrangement. One Bangchan farmer put it this way,
434 "Hired labor is usually more expensive than family labor
465 except in good years, for you can't help giving generous gifts to the family in a good year. This year (1949, the year following a bumper 1948-49 crop) I gave my two daughters

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434 465 593 300 baht for clothing, 500 baht which they spent mostly on a pilgrimage to the Temple of Buddha's Footprint, and 670 baht for two gold necklaces. That's a total of 1470 baht for the two of them. My wife alone took 1,100 baht received from the sale of the early variety, and I don't want to take the trouble to ask where the money went."

It has been observed that farm income varies greatly from farm to farm as well as from year to year. Farm household expense, on the other hand, has been observed to be less variable. Although the remunerations for farm operators and family workers are directly related to farm income, it would seem unwise to discuss farm income without bringing in first the discussion on farm technology and farm organization and management. We propose, therefore, to limit at the time being our discussion of the remunerations of farm operators and family workers to indicating their respective sources only. We shall have occasion to deal with their patterns and magnitudes in Chapter VII, which will be exclusively devoted to income and consumption of farm operators.

465 178 The hired laborer receives his remuneration for the farm work in the form of annual wage which is paid by his employer, the farm operator, according to the provision of the oral contract made before each working season. It was found in 1948 that this annual wage was paid in either cash or kind, and in addition the laborer received free board and lodging and one or two working suits. Of 13 hired laborers covered by the 1948 survey, five were paid a cash wage

243 included in the items of cost of producing paddy, and there-
621 fore we do not have the figure for this item of farm expenses.
433

It was earlier mentioned in the section on occupa-
tional structure in Bangchan that most villagers regardless
434 of their main occupations did perform some piece-work for
464 either main or subsidiary incomes. It is almost impossible,
621 then, to give an exact figure of the number of piece-workers
463 in any one year. For the purpose of this study, however,
we may arbitrarily differentiate between the "professional"
and the "non-professional" piece-workers. Here, the classi-
fication suffers much overlapping -- even more than does the
classification of the occupation of the villagers, for we
cannot even use the concept of the main source of income as
a criterion in this connection. It was mentioned that farm
laborers existed in Bangchan not because of demand for their
work but because they have no opportunity for other occupa-
tions (page 100). Thus, if the main source of income was
used as the criterion for differentiating the "professional"
piece-workers, this group would include, for example, the
old woman described in Case 7 page 69, who after having been
left alone had managed to get a small income from trans-
planting which was the only type of farm work she could
perform. The main source of income was also not a good
criterion considering the fact that most piece-work was
done by family members after their obligation to the family
464 farm had been fulfilled. In a desperate attempt to differ-
463 entiate the professional from the non-professional piece-workers

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There are reasons to believe that newly established indigenous families had tended to take up farming. First, rice growing is probably the only profession that these newly wed couples had been properly trained for.[5] Second, during their nascent period their financial preparation had been oriented toward starting a rice farm. This is best illustrated by a remark of a Bangchan operator whose daughter and her husband were about to start an independent family:

> A (informant's son-in-law) is now (1954) 24 years old. I have known him since 1948 when he was a transient family member of B. A married my daughter C in 1952 and has since been living with me. He is a very diligent man who works even in the dry season -- digging earth and that sort of thing (for his own lampai).
>
> I gave the couple 200 tang of paddy for their lampai for last year's work. I am going to give them the product from 10 rai for this year's work.
>
> Already the couple have accumulated from their lampai the following: two baht weight of gold, lumber enough to construct a farm house, and 100 tang of paddy. I told them not to keep their money in cash. When they receive a certain amount of money, I instruct them to buy durable goods like lumber or buffaloes. But if they want to lend out money, it's all right with me. Any way, they are not to keep cash. By the way, they have loaned out the 100 tang of paddy, so they will have more paddy when that amount is returned with interest.
>
> The couple will leave me next year. They have most of the things they need for starting a family now. In fact they wanted to start out this year, but I asked them to stay on another year.
>
> When they leave me next year, I will give them the customary parental gifts -- one buffalo, one plow, one harrow, one clothing container, and paddy for seed and for consumption.

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5. See the section on training for farm work.

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It is seen that some of these measure farm business success more nearly, and some of them the success of the farm-family enterprise.

• 434 *128 To measure Bangchan operators' remuneration, the author thinks that operator's labor earnings is most suitable.and the next best measure is perhaps the labor income. It was mentioned that Professor Hunt devised labor income as a means of comparing the efficiency of management of individual farms in the same area, practicing about the same kind of farming, and with the same general level of land values and cash rentals. Bangchan conditions, as earlier described, seem to approximate circumstances which Professor Hunt had in mind when he devised this measure.

*243 434 *[128] Table 47 shows frequency distribution of labor income of the 104 sample-farms for the 1948-49 crop year. It is seen that only 57 of these 104 farms produced a positive labor income. Thus, even in the year which many Bangchan farmers considered to be the best rice year in their lives, more than four out of every ten farmers in the sample did not have anything left from the sale of their crop after deducting all farm business expenses and interest on the [427] capital invested. It should be noted, however, that the family still has other incomes accruing to family labor (value of family labor), the use of family owned land (imputed rent), and the use of family owned equipment (interest), as well as the imputed returns to family labor deducted in the calculation of labor income. The family also has the subsistence production which it draws from the farm.

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TABLE 47

FREQUENCY DISTRIBUTION OF LABOR INCOME
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

*243
• 434

Class Intervals	Number of Farms
baht	
9,000 - 9,999	1
8,000 - 8,999	0
7,000 - 7,999	0
6,000 - 6,999	1
5,000 - 5,999	2
4,000 - 4,999	2
3,000 - 3,999	7
2,000 - 2,999	6
1,000 - 1,999	12
0 - 999	26
-1,000 to -1	25
-2,000 to -1,001	12
-3,000 to -2,001	3
-4,000 to -3,001	4
-5,000 to -4,001	2
-6,000 to -5,001	00
-7,000 to -6,001	0
-8,000 to -7,001	0
-9,000 to -8,001	1
Total	104
Mean	356 baht
Median	212 baht

243 Of 47 farms which had negative labor incomes, 37
434 were in the class interval of from -1 to -2,000 baht, 9
[435] from -2,001 to -4,000 baht, and one -- the least efficient as far as this measurement is concerned -- produced as low a labor income as -8,006 baht. This last farm had to support a large family of eleven members. With an acreage of 40 rai, which was rather small relative to the size of the family (another family of ten was operating a 110-rai farm in that same year), it was natural that this farm did not have much rice to sell.

243 In figuring farm expenses, we intentionally left
434 out the dwelling and included as farm buildings only the
342 ones that housed the buffaloes, farm equipment and materials.
[427] The main reason for this omission was that there was a wide
[435] range of dwelling facilities in Bangchan -- from a teak building valued at 30,000 baht to a dirt floor thatched shack valued at no more than a few hundred baht. Besides, rental for a dwelling in rural areas of the country is practically unknown. Since a family living in the village must have their own dwelling regardless of their occupation, it was considered in this study that dwellings should be separated from farm investment. This consideration was further substantiated by the fact that when a family gives up farming they continue to live in the dwelling while all the farm equipment may be sold.

243 When the charge for dwelling is dispensed with for
434 the reasons given above, the only difference between labor
433

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243 income and operator's labor earnings lies in the value of
434 farm produce consumed by the family. Earlier, five kinds
433 of produce were listed -- rice, fish, eggs, fruit and vege-
[235] tables. For technical reasons, we consider only rice and
eggs as products of the farm, rice being the primary crop
[226] and eggs the secondary crop. Fish is not considered a farm
product because Bangchan villagers fish for consumption,
not for sale. Besides, fishing is done by every resident
of the village, farmers and non-farmers alike. It is thus
[244] more of a way of life than an economic enterprise. The same
[245] is true for fruit and vegetable growing which is done in a
very small scale.

If we agree on considering only rice and eggs as the products of the farm, it is not difficult to estimate the amount and value of farm produce consumed by the family for Bangchan operators can readily give a rather accurate information on their rates of consumption of these two products. Thus, under Bangchan condition the figure for operator's earnings is not as difficult to obtain as it appears to be the case among most American farms. The frequency distribution of operator's labor earnings of our 104 sample-farms is given in Table 48. It is seen that only 17 farms produced negative remuneration for the operator computed by this method as against 47 farms by the labor income method. As Professor Warren has said, of these two, labor earnings is a better
[171] measure of profits. It is especially so in Bangchan and perhaps in other agricultural regions in Southeast Asia

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TABLE 48

FREQUENCY DISTRIBUTION OF LABOR EARNINGS
OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
11,000 - 11,999	1
10,000 - 10,999	0
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	2
6,000 - 6,999	4
5,000 - 5,999	4
4,000 - 4,999	7
3,000 - 3,999	7
2,000 - 2,999	18
1,000 - 1,999	27
0 - 999	17
-1,000 to -1	12
-2,000 to -1,001	3
-3,000 to -2,001	1
-4,000 to -3,001	0
-5,000 to -4,001	0
-6,000 to -5,001	1
Total	104
Mean	1,980 baht
Median	1,685 baht

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243 where farm families are relatively large and agricultural
434 workers are usually under-employed.
433
[171]

Since farming in Bangchan is basically a single-crop enterprise, the major crop (rice) heavily outweighing the secondary crop (poultry), we are in a position also in this study to use another measure of success -- returns from rice over the cost of producing it -- without entailing the difficulty of cost allocation. We simply charge all items of expenses including the values of family labor and the operator's labor to the rice enterprise, the only exception being the value of paddy consumed by chickens and/or ducks. By returns from rice is meant the market value of the total harvest of paddy. This measure is similar to the net farm income when the farm products used by the family are included in the receipts (in some states of the United States this is done, but ordinarily not, the main reason for leaving these out being the difficulty of imputing accurate money values to them).

243 Tables 49 and 50 shows respectively the frequency
128 distribution of the cost of producing paddy per tang and
434 per rai for the 104 sample-farms. It is seen that the coef-
433 ficient of variability of the cost per rai is lower than that of the cost per tang, the former being 19 per cent and the latter 27 per cent. This is to be expected, for on the basis of such a unit area as rai there are several items of cost that are somewhat fixed -- seeds, rent, human and buffalo labor in all steps of field preparation, planting, and

[TEXT CONTINUED ON PAGE 309]

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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TABLE 49

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE TANG OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
4.00 - 4.99	14
5.00 - 5.99	21
6.00 - 6.99	19
7.00 - 7.99	25
8.00 - 8.99	13
9.00 - 9.99	6
10.00 - 10.99	2
11.00 - 11.99	2
12.00 - 12.99	1
13.00 - 13.99	0
14.00 - 14.99	1
Total	104
Mean	6.76 baht
Median	6.92 baht
S.D.	1.87 baht
Coef. variability 27 per cent	

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 50

FREQUENCY DISTRIBUTION OF COST OF PRODUCING ONE RAI OF PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

Class Intervals	Number of Farms
baht	
120 - 139	2
140 - 159	8
160 - 179	7
180 - 199	19
200 - 219	22
220 - 239	23
240 - 259	11
260 - 279	5
280 - 299	4
300 - 319	0
320 - 339	2
340 - 359	1
Total	104
Mean	215 baht
Median	215 baht
S.D.	41 baht
Coef. variability	19 per cent

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

harvesting. The only cost item that appears to vary with the size of the crop is the cost of threshing and winnowing which does not figure prominently in the cost of producing rice.

Table 51 shows the frequency distribution of returns over cost of producing rice of our 104 sample-farms.[5] It is seen that there were 79 farms which, according to this measure, produced some profit ranging from 0 to some 10,500 baht, while there were at the same time 25 farms which produced a loss ranging from -1 to some -6,500 baht.

Factors Affecting Farm Profit

Farm profit depends on a number of factors. Among these are listed below by Hart and Warren as "what makes a farm pay."[6]

1. Prices
2. Quality of land
3. Size of business
4. Rates of production of crops and animals
5. Selection and combination of enterprises
6. Labor efficiency
7. Farm layout, farmstead and building arrangement

[TEXT CONTINUED ON PAGE 311]

5. Returns over cost was calculated by multiplying the rice crop by farm price and deducting the total cost from this total. Method of computing cost was described on page 143.

6. V. B. Hart and S. W. Warren, Farm Management Manual.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

TABLE 51

FREQUENCY DISTRIBUTION OF RETURNS OVER COST OF PRODUCING PADDY OF 104 SAMPLE-FARMS
Bangchan, Thailand, 1948

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Class Intervals	Number of Farms
baht	
10,000 - 10,999	1
9,000 - 9,999	0
8,000 - 8,999	0
7,000 - 7,999	1
6,000 - 6,999	1
5,000 - 5,999	4
4,000 - 4,999	4
3,000 - 3,999	6
2,000 - 2,999	11
1,000 - 1,999	20
0 - 999	31
-1,000 to - 1	12
-2,000 to -1,001	88
-3,000 to -2,001	3
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	0
-7,000 to -6,001	1
Total	104
Mean	1,190 baht
Median	887 baht

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
Bangchan

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8. Efficiency in the use of farm equipment

9. Markets and marketing

While these nine points may appropriately be considered as standard factors affecting farm profit, it is obvious that the extent of their respective effect varies with location, type of farming, and the stage of technological development of the area in question. In Bangchan, we may immediately rule out as an important variable the selection and combination of enterprises because there is only one enterprise -- rice. Farm layout, farmstead and building arrangement is also a rather insignificant factor as a variable affecting the profit of rice farms, although we have earlier noted that parcelization may have increased the cost of labor and irrigation. Efficiency in the use of farm equipment may also be considered as an insignificant variable factor in Bangchan; for the equipment units are usually small although numerous, hence farm equipment tend to be fully utilized.

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Labor efficiency needs more explanation than mere passing comment. Table 52 shows that labor constitutes 51 per cent of the total cost of producing rice. It should be noted, however, that of 3,743 baht that goes to labor for each farm only 485 baht is actually spent, the balance of 3,258 baht being imputed values of family's labor and the operator's labor. It is seen, then, that a reduction in labor cost would involve largely only imputed values. It certainly will correspondingly reduce the total cost

[TEXT CONTINUED ON PAGE 313]

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TABLE 52

BREAKDOWNS OF COST OF PRODUCING RICE ON 104 SAMPLE-FARMS
Bangchan, Thailand, 1948
(Total area -- 3,528 rai; total crop -- 112,415 tang)

Items	Total	Average Per Farm	Average Per Rai	Average Per Tang	Per Cent
	baht	baht	baht	baht	
Rent					
Actual	99,500	957	28	0.88	13
Imputed	70,600	679	20	0.63	9
Total	170,100	1,636	48	1.51	22
Labor					
Actual					
Pieceworkers	25,700	247	7	0.23	3
Hired laborers	24,800	238	7	0.22	3
Sub-total	50,500	485	14	0.45	6
Imputed					
Family workers	237,800	2,287	67	2.11	31
Operator	101,000	971	29	0.90	13
Sub-total	338,800	3,258	96	3.01	44
Total	389,300	3,743	110	3.46	51
Seeds, materials	42,600	409	12	0.38	6
Depreciations	73,200	704	21	0.65	10
Interest on investments	84,600	813	24	0.75	11
Grand Total	759,800	7,305	215	6.76	100

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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243 and enhance income from the farm, but it would not sig-
434 nificantly affect the farm family income or income for the
461 family living (see definitions under Headings 7 and 8 of the section on the operator's remuneration and measures of success) unless more land is added.

243 In rice farming, rates of production of crops and
433 animals is reduced to rice yield per rai. At the present
434 stage of technological development in Bangchan, this is not as much a result of management as of nature -- the water condition and the quality of land (in both senses of soil fertility and levels of the fields). Since we already have quality of land as a factor, rates of production may thus be eliminated.

After eliminating factors that are either insignificant or duplicates of other factors under Bangchan conditions, the standard factors affecting farm profit are thus reduced to prices, quality of land, size of business, and markets and marketing. These influences are familiar to students in agricultural economics, and therefore do not need further elaboration here.

[171] In addition to these standard factors, there are certain special factors affecting farm profit which the author suspects to be appropriate not only to Bangchan but also to all other rice producing areas of Southeast Asia. These are the differentials in paddy prices, in rates of interest, rentals, and wage.

243 426 432 Differentiation in paddy prices is limited to cases where farmers have received in advance the payment for paddy to be delivered at harvesting time. This is a common practice which is called in Thai "tog khao" (lit., fall rice). Usually, the advance price received by the farmer is about half or not more than three-fifths of what he would normally receive. Considering that cash is usually received about a month or two before the delivery of the paddy, it would seem that tog khao is a kind of loan with as high a rate of interest as from 25 to 50 per cent per month.

243 426 465 A similar practice is adopted with respect to advanced payment for piecework, where pieceworkers are committed to uproot, transplant, or harvest at about half of the prevailing rates. This is called tog raeng (lit., fall labor).

243 128 427 Tables 24 and 25, in the section on land tenure of Chapter III, show a wide range of rental rates of rice lands which have not demonstrated any marked difference in crop producing ability.

Rates of interest in Bangchan vary greatly from 0 to 10 per cent per month. This topic will be discussed more fully in later sections of this chapter.

243 434 556 The important point that should be observed in connection with these differentials in paddy prices, rates of interest, rentals, and wage is that it is the less affluent farmers who usually bear the burden of higher costs due to these practices. Thus, these differentiations serve only to widen the gap between poor and well-to-do farmers.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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recovery of a boat stolen, 390 baht on "laxity", and 30,000 baht on a trip to Mecca. The gifts to offspring included only gifts presented when offspring left the family to start an independent family of their own.

Special Receipts

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By special receipts we mean major items of receipts in addition to those regularly obtained from crops, labor, rent, and interest on loans extended. These are counterparts of special expenses, and informations about them were obtained from the 96 sample-families in the same manner and almost concurrently. Examples of these special receipts are: sales of land, gold, and major farm equipment; loans obtained, full or partial settlement of loans extended; gifts and remittances; and odd receipts like those from government lottery prizes, running a gambling house, and laxity practices. Special receipts of the 96 sample-families during the period from March, 1948 to February, 1953 were shown in Table 58.

Some of these items of special receipts need explanation. Land sold by two farm operators were sold for cash needed for loan repayment. It is perhaps worth noting that one of these two operators was in the habit of heavy drinking and had been in recent years spending about two thousand baht annually on liquor alone, while the other was in the habit of gambling. All five operators reporting sales of gold gave the reason for the sale that cash was needed to either buy farm equipment (buffaloes) or to repay

[TEXT CONTINUED ON PAGE 333]

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TABLE 58

SPECIAL RECEIPTS OF 96 SAMPLE-FAMILIES DURING MARCH, 1948 -- FEBRUARY, 1953
Bangchan, Thailand

Items	Amount	Number of Families Reporting	Average for Family Reporting	Ranges
	baht		baht	baht
Sale of land	18,700	2	9,350	7,700 - 11,000
Sale of gold	12,150	4	3,038	250 - 6,000
Sale of farm equip.	6,500	5	1,300	500 - 3,000
Loan settlements	1,700	2	850	200 - 1,500
Loans obtained	141,100	29	4,866	400 - 30,000
Remittances	6,200	2	3,100	200 - 5,000
Odd receipts	6,500	3	2,167	1,500 - 3,000
Total	192,850			

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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434 the loans previously extended to them. Among the five operators reporting sales of farm equipment, one sold his part of the joint ownership of an engine in order to buy a new one for his own, three sold their old buffaloes and bought younger ones, and one -- the inventor of the propeller windmill mentioned earlier in this dissertation -- sold windmills and other farm implements he made for sale.

434 The average amount of money received from loan set-
426 tlement during the past five years of 1,700 baht appeared
432 to be too small considering that the amount of loans ex-
511 tended by the sample-families during the period was as high as 51,630 baht and that the ability of these sample-families to settle loans extended to them was 101,530 baht out of a total of 141,100 baht. An explanation for this lies in switching of debt responsibility. At least one case was known where an operator, who was in debt to a fellow farm operator, sold a parcel of land to a third party at 11,000 baht. This buyer, apparently not having enough cash, arranged that he would assume responsibility for the amount of 8,000 baht which the seller of the parcel owed the other farm operator and would pay only the balance of 3,000 baht to the seller in cash. Strictly speaking, the creditor should report that he received a certain amount as loan repayment (actually, 4,000 baht for the principal and 4,000 baht for interest of 25 per cent for four years) and spent this same amount on loan extension. Actually, however, only the seller of the parcel reported that he had sold a

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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426 parcel of land and had cleared off his debt. The creditor
432 did not report anything about this deal, for he really did
511 not receive a cent out of the arrangement.

434
426 Loan obtained is the largest item of special receipts
511 involving 29 farm operators and 141,100 baht. The following were the purposes of the loans sought as given by borrowers: land purchase, 7 cases; buffalo purchase, 3 cases; sponsoring rituals, 3 cases; to partially defray ordinary household expenses which exceeded cash incomes especially in years of poor crop, 16 cases; and to cover major medical expenses, 2 cases (two operators listed two combined purposes of the loan, hence the total becomes 31 instead of 29 if there is only one purpose for each case).

Net Accumulation of Assets

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511 Figures of net accumulation of assets within a certain period are valuable to the understanding of the economic conditions of farm operators in that they show the economic achievement, or the internal saving, of these operators. In order to obtain exact figures, however, it is necessary that we have complete inventories of the farm families at the beginning as well as the end of the period. Since our data on inventories of the sample-families for 1948 and 1953 are incomplete, especially we are totally unaware of the quantitative debt situation in 1948, we cannot use the simple method of subtracting the net worth as of February, 1953 from that as of March, 1948 to determine net accumulation

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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of assets during this five-year period. At best, we can only attempt at estimates based on certain known figures from records of special receipts and special expenses described in the two preceding sections.

Assets may conveniently be broken down into land, dwellings, household equipment, farm buildings, farm equipment, livestock, supplies, gold, cash, and accounts receivable (payable). We shall see that some of these may be left out of consideration in our method of calculating net accumulation of assets from records of special receipts and special expenses during March, 1948 and February, 1953.

It was observed that all the sample-families used the same dwelling throughout the period. Any cash outlay in repair should not be considered as an increase in inventory at least as average over the whole sample, for it can be reasonably assumed to be an amount necessary to maintain the dwelling at its original value at the beginning of the five-year period.

Assuming no change in technology, as was observed to be the case, farm buildings and farm equipment can also be left out of consideration for the same reason as the case of dwellings. It was observed that farm operators in Bangchan kept no more farm equipment than necessary. New purchases can thus be assumed to be replacement for worn-out equipment, and should not be considered as inventory increase, again when averaging over the whole sample.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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The only livestock kept on rice farms other than buffalo, which were included under consideration of farm equipment, are chickens and ducks, which are raised "naturally." It was earlier mentioned that the size of the flock was more or less constant. Livestock, therefore, did not figure in significant inventory changes, and can also be left out.

The only item of supplies on rice farms is paddy stock. This is used up and sold out each year. For more or less the same size of farm, and spreading over a series of five years, a difference in the average amount of paddy stock at about the same time of the year in 1948 and in 1953 would not figure significantly in inventory change.

It was also already mentioned that rice farmers did not want to keep cash at their homes for fear of robbery, and that any person receiving a large amount of cash quickly passed the money on to others. We can therefore assume that the amount of cash on hand at the same time of the year does not vary much. Cash, then, may also be left out of consideration.

Of the items of assets enumerated above, there are now to be considered only land, household equipment, gold and accounts receivable (payable). In all purchases of land, gold, and household equipment, only the cash paid was recorded and considered as assets accumulated. For example, when an operator purchased a parcel of land at 7,000 baht and paid the down payment of 1,000 baht, only the 1,000 baht

434 was considered as spent in land purchase. If, however, 432 he made another partial payment of 2,000 baht during the 511 period covered by the study, a total of 3,000 baht was considered. Since purchases of gold and household equipment are normally made with cash, a total of cash spent on these three items (land, household equipment and gold) would seem to fairly well indicate the extent of internal saving of each family. The assumption here is that one would not 434 426 borrow money to buy gold or a gun. With this correction 511 the figure remaining will represent a change in net assets, if we can assume no other changes in the debt situation. For those who bought these assets, it is very unlikely that any increase in outside debt occurred. The reason for this belief lies in interest rate differences: any person with some cash (which may be borrowed at low rate of interest in case he was about to buy land) would rather settle his high interest bearing debts first before buying household equipment or gold or making down payment for land. For those who did not buy these assets, some increase in debt for consumption purposes may have occurred. Both groups may have decreased debts during this period. The most likely assumption is that those buying land experienced a net decrease in debts other than those incurred in buying land, while those not buying such assets experienced a net increase in debts. The balance was probably one of some increase in debt in the village. Therefore, although these [454] figures for net accumulation of assets provide a fair

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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426 representation of internal savings in the community, they
454 probably overstate this increase somewhat.
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When calculated in the manner outlined above, the
511 net accumulation of assets of our 96 sample-families was
434 found to total 84,942 both during the period from March, 1948 to February, 1953, averaging 885 baht per family per year. The frequency distribution of this accumulation of assets is shown in Table 59.

It is seen that of 96 sample-families, 90 had positive accumulation while only 6 had negative accumulation. Fifty-six or more than half of the total number of families studied had an accumulation of assets in the class interval between 0 and 999 baht. The highest amount of accumulation was found to be 9,000 baht, while the lowest was -10,470 baht.

We should examine the figures of Table 59 more closely before drawing a sweeping conclusion from the mere fact that 90 out of 96 sample-families had positive accumulation. In the first place, the raw data show that of the 56 families reporting accumulation in the class interval of 0 - 999 baht, there were 42 families whose accumulation was 0. Thus the number of families with positive accumulation was really not 90, but actually 48 or only half of the total sample-
[435] families. Besides, consideration must be paid to the fact that gold is not only a kind of security but also an article of prestige as well, and a gold necklace of 15 - 30 gram weight valued at 500 - 1,000 baht is usually worn by a rural Thai who can afford one. When a person reappears in the

[TEXT CONTINUED ON PAGE 340]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 59

FREQUENCY DISTRIBUTION OF NET ACCUMULATION OF ASSETS*
BY 96 SAMPLE-FAMILIES
Bangchan, Thailand, March, 1948 -- February, 1953

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Accumulation in Baht	Number of Families
9,000 - 9,999	1
8,000 - 8,999	1
7,000 - 7,999	2
6,000 - 6,999	1
5,000 - 5,999	1
4,000 - 4,999	3
3,000 - 3,999	3
2,000 - 2,999	9
1,000 - 1,999	13
0 - 999	56
-1,000 to -1	2
-2,000 to -1,001	0
-3,000 to -2,001	0
-4,000 to -3,001	0
-5,000 to -4,001	1
-6,000 to -5,001	1
-7,000 to -6,001	0
-8,000 to -7,001	1
-9,000 to -8,001	0
-10,000 to -9,001	0
-11,000 to -10,001	1
Total	96

Mean . . . . . 885 baht
Median . . . . . 113 baht

* Includes net purchases of land, gold, and major household equipment.

7: Janlekha X-4,5 (1948-1953)1956 AO7 Central Thai AO7
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511
434 village after long absence, his achievement will be judged not by the words from his mouth but by whether he has less or more gold than the time he left the village. The importance of gold as a prestige item being as it is, it is not surprising at all to see that a farm operator who did not have any gold will tend to buy a necklace when he receives a lump sum from the sale of rice although he knows that the amount would not last until the next harvest even without that extra expense on the necklace. When this farm operator ran out of money say in July or August, he would rather go into debt than part with that necklace if it really is his only adornment. Tables 57 and 58 show that within the five-year period there were 48 families buying in gold as against only four families selling out gold and that the average for those buying in was 1,341 baht per family while the average for those selling out was 3,038 baht, indicating that when financial pressure arose it was the families having more gold than necessary for display that tend to sell it. Realizing this situation, the author thinks that it is justifiable to give an allowance of about 1,000 baht for gold purchased for prestige purposes. If we agree on this point, there would remain only 34 families demonstrating accumulation of wealth, possibly through internal savings.

Debt Situation

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511 In order to understand the debt situation in Bangchan, it is necessary to distinguish debts created by purchasing goods on credit, which we shall henceforth call credit

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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426 Thus, figures of total debts alone are almost meaningless
432 unless they are itemized and the date when such accounts
+128 are outstanding is specified.

*128 Cash Situation and Role of Paddy

• 434 It is not the purpose of this study to quantify the cash situation in the village. Even mere estimation would already be too ambitious a task for a study of this nature. We propose, therefore, to give only an outline of the cash situation with the hope that it may serve as background information for further research along this line.

434 1. Extent of money in circulation

a. Incoming

Village net exportable rice: Total crop -- seeds (1 1/2 tang per rai) -- amount consumed by the family (30 tang per man-unit) -- feed or amount consumed by poultry (4 tang per chicken-unit: rooster, 1 unit; layer, 1 unit; chic, 1/4 unit; duck, 1 unit).

Village net exportable poultry products: Total egg production -- amount locally consumed, and total young roosters (7 months old) -- amount saved for breeding purposes.

Money regularly earned from outside sources: wages and salaries (teachers, headmen, janitors, workers on highways, and other workers drawing pay from outside sources); rentals (paid to village residents owning lands in other villages); remittances from outside; dividends if any.

Exportation of other products: mushroom, lotus.

Loans obtained outside the village.

Settlement of loans extended to outsiders (very limited, if any at all).

Sales of lands, gold and jewelries, capital goods to outsiders.

434 Cdd receipts: lottery prizes, gambling, etc.

b. Outgoing

Imports: Several items of food, clothing, stimulants, medicine, toilet, fuel; building materials; buffaloes, farm implement, farm materials; gold and jewelries and other articles of adornment; stationary (very limited); ordination and other ritual items.

Outsiders' regular earnings in the village: rentals of land owned by outsiders, interest on loans and equivalent extended by outsiders, wage paid to outsiders (limited to peripheral areas).

Taxes, contributions and fees: land taxes, fees and contributions paid to outsiders.

Purchases of lands owned by outsiders.

Settlement of loans extended to outsiders.

Investment outside the village (one Bangchan resident owns shares of an electricity concern in Minburi totalling 5,000 baht, the same person had invested a total of 10,000 baht on a fishing enterprise in a coastal town).

Remittances: for educationof children sent to Bangkok.

Travelling expenses and pilgrimage.

434
458 2. Seasonal fluctuation of money supply

Money supply fluctuates very highly in the village because of pronounced periods of sale of paddy and of the method of payment for it. There are two periods of sale: during late December and March, and during July and November. There is practically no sale between March and July because canals are impassable during this more or less dry period. Actually, it is dry from March to May; after that although rain has started, the water level in the canals is not high

434 458 enough for efficient movement of paddy.

The general practice was that right after harvest immediate sale of paddy was necessary for settlement of credit purchase accounts and rentals. Another sale was perhaps necessary a few days later for living expenses which had been postponed during the cash-scarce [796] period before harvesting. Then another sale might be made in order to have cash to pay for building materials needed for repair work which was usually done during this time. Just before March a final sale for this first period was made in order that the family may have cash enough to last through July. The money was to cover contributions to various rituals to which the family had already been invited, and perhaps to cover ritual sponsor by the family itself. Besides, there was still need for cash for each family member to carry around during this period of festivals.

243 434 458 Villagers said that few farm operators had any paddy left for sale in the second period (July - November). This was contrary to our findings as shown later in Table 65. Perhaps, they were thinking of conspicuous sales of large amounts by farmers having say over 500 tang of paddy for sale in the second period.

* [128] During the last few days of March, 1953, when paddy sale had apparently ceased, we made a round call covering the homes of all 96 sample-families and checked the amount of paddy on hand as of the end of March.

[TEXT CONTINUED ON PAGE 360]

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
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TABLE 65

FREQUENCY DISTRIBUTION OF INDICES OF CAPITAL FORMATION POTENTIAL OF 96 SAMPLE-OPERATORS
Bangchan, Thailand, March 31, 1953

Class Intervals tang	Frequency
2,000 and over	1
1,000 - 1,999	1
900 - 999	1
800 - 899	0
700 - 799	2
600 - 699	0
500 - 599	1
400 - 499	6
300 - 399	5
200 - 299	8
100 - 199	15
0 - 99	22
-100 to -1	25
-200 to -101	9
Total	96
Mean	145 tang
Median	65 tang

• 434

*243
*128 This was one of the easiest jobs of the whole study.
433 There were few cases where we did find anybody at home
434 and there were many more where only young children
[574] were seen. Since a Thai farm home is considered an open house to fellow villagers, we simply took liberty of walking right through and made an inspection by ourselves. Thus in a period of less than a week we were able to secure the figures of paddy stock on hand of every single operator in the sample.

The amount of paddy stock alone simply indicates but not represents sale in the second period, for a certain portion must be saved for seeds, consumption and feed. It is rather simple, however, to calculate the amount saved, for we were already in possession of work areas from which the amount of seeds may be estimated and we knew the size of the family (in terms of both actual number and consuming units) from which consumption may be figured.

*243 In this second period, sale was made when the
432 farmer thought the price was high enough. Usually,
434 the prices of paddy were about 15 - 30 per cent higher during this period than in the first period when supply was high. The rate of shrinkage should be taken into consideration, however, for prices are expressed in volume. It is rather unfortunate that we do not have any official record for this vital rate of shrinkage. In our daily log, however, the following testimony appears:

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Farmer A: "I put my paddy in the warehouse in the first half of the second lunar month (December 17-31, 1952). In the second half of the fourth lunar month (March 1-15, 1953) I sold it (and thus measured it ag in). I found that within these two and a half months of every 100 tang only 87 tang remained."

"Judging from experience, paddy starts decreasing its size and weight through the process of evaporation since the time of harvesting, and it is not before July that it becomes dry enough to retain its size and weight thereafter."

Farmer B: "Is it not possible that your 13 per cent loss was due to the chickens?"

Farmer A: "No. During that time (December-March) the chickens were well fed. There was a lot of paddy scattering in the home yard. They would not bother going up into the warehouse (mat bins)."

C (of Cornell group): "Lazy chickens might feed right in the mat bins with plenty of paddy."

Farmer A: "I don't think so. Lazy chickens would not take the trouble to fly. They'd rather prod around the home yard."

Another reason for sale during this second period, in addition to good prices, was a prospect of good investment, mostly loans, mortgages, or land purchases.

7: Janlekha X-4,5 (1948-1953)p956 AO7 Central Thai AO7
Bangchan

432 seller of the land did not show up until the next morning. Recruit had to be made for guns and men to guard the money for that whole long night.

3. Scarcity of money—

243 434 Scarcity of money exists in Bangchan because there is, relative to the demand for purchased goods and services, only a small margin between the price received and the cash outlay of producing paddy. Another reason is that most farms are too small, thus yielding small net cash incomes to the majority of farm operators in the village. Small incomes of farm operators who constitute the core of village economy means also small incomes of the rest of the village population whose financial condition directly or indirectly depends on incomes of farm operators.

426 458 Scarcity of money is directly evidenced by shortage of money during theperiod from July to December. It is also indicated by high rates of interest on credit purchases and loans sought in the village.

434 454 The problem of scarcity of money has been rendered more acute by the fact that affluent farmers do not like to keep cash at home or put it in liquid form such as in saving bank in the nearby market town, but prefer to invest it in a more or less non-liquid form such as loans or land purchases. Some of those who had accumulated a large amount also tend to spend it on sponsoring of rituals costing as high as several

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434 454 796 thousand baht to more than ten thousand baht which is a real drain on the village cash supply.

These huge expenses are, however, partially compensated by such items as loans sought from outside or sale of lands and other assets. It cannot be expected, however, that these items would provide enough supply of cash to bring down the rate of interest in the village.

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4. Role of paddy

*243 436 Paddy is extensively used in the village as a medium of exchange. It is used in both small transactions of a few baht and large transactions of several thousand baht. Thus paddy stock may almost be considered as equivalent of a bank balance.

*243 433 436 454 The most important consumption uses of paddy are as seeds and for human consumption. In order to make it really comparable to a bank balance, allowance must be made for the amount necessary for seeds and human consumption although the amount for chicken feed may be dispensed with because the farmer may choose to drop his poultry enterprise. On this basis, we have arbitrarily coined a term "index of capital formation potential with present levels of living" to represent the amount of paddy in tang which is left at the operator's disposal at the end of March after allowance for seeds and family consumption has been made. No allowance is made for special consumption expenses such

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CHAPTER VIII

SALIENT FEATURES OF ECONOMIC PROBLEMS OF BANGCHAN

*128 Problems of economic significance have been constantly brought out during the course of discussions in Part I and Part II, some explicitly and others implicitly. In this chapter we shall undertake to restate these problems and summarize their salient features.

Low Incomes

*243 ● 434 Data earlier presented show that the basic problem of Bangchan is that incomes of farm operators are low. Low income is due on the one hand to low return from rice, and on the other to limited earning opportunity from other sources.

Return from rice depends on yield, cost, price received, and size of the farm. Among these four factors, yield did not appear to be an immediate problem contributing to low return of Bangchan farms, since a five-year average of 28.8 tang per rai for Bangchan can be favorably compared to those of most of the other rice growing areas in the country. Yearly fluctuation of yield, nevertheless, shows that there is room for yield improvement through application of fertilizer, use of better seeds, and more efficient control of water supply.

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The cost of producing rice in Bangchan of 6.76 baht per tang of paddy in 1948 (according to our method of calculation earlier described) appears to be rather high in relation to an average price of 7.86 baht received in the same year. A net gain of 1.10 baht per tang of paddy seems to be inadequate with an average annual output of 1,081 tang of paddy per farm; even though every farm operator still has in addition incomes for family labor (in terms of value of family labor including himself) and from ownership of farm equipment (in terms of interest), and some operators who work on their own land still have additional incomes from ownership of land (in terms of implicit rent). As things stand at the present, this calculated cost can hardly be reduced in the near future unless there is an abrupt change in technology.

Many Bangchan operators appeared to thrive well under this condition of high cost because about three-fourths of the total cost of production was imputed and did not require an immediately cash outlay. Some of these cost items were hidden in the form of gradual depreciations which were not actually provided for each year. These would certainly be realized, however, when for example buffaloes died or equipment broke down. Even the imputed cost for family labor could not indefinitely be postponed. Family workers did not demand a lump sum payment like wages for laborers, but they had to be fed and clothed, and certainly personal expenses had to be allowed for them. Some

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243 Some farmers had artificially reduced their operational cost by
474 utilizing free labor of transient members of the family,
464 who would not stay long if they were not adequately taken care of. These farmers would have to resort to pieceworkers or hired laborers when transient members decided to leave them.

243 The farm price of paddy was adversely affected by
434 the government control of rice export. It was estimated
655 that huge profits of no less than 100 per cent had been made each year by the government through its monopoly over and later control of rice export and foreign exchange control. This will be dealt with separately later in this chapter.

243 Although the average size of farm of 30.7 rai for
474 Bangchan can be favorably compared to the average of 23.1
423 rai for the Central Plain, this does not mean that size of farm is not a problem contributing to low returns from rice.
[444] It was pointed out earlier that there was a condition of disguised unemployment among Bangchan operators. Small size elsewhere simply indicates the widespread nature of the problem of disguised unemployment among farm operators in the Central Plain.

243 Limited earning opportunity for incomes from sources
434 other than rice is due to the fact that at the present stage of technological development no other crop can be profitably grown in rotation with rice because of agronomic limitations.

243 The inundation period from the middle of September
434 to early December, during which time no work is needed on
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243 the rice enterprise, cannot be devoted to gainful utiliza-
221 tion of labor because: (a) there is not enough space in
414 the homelot, the only place above water; (b) poultry is not
a competing crop as long as it is raised naturally in limited
number. It becomes a competing crop when it is raised com-
[235] mercially. Commercial raising of poultry in Bangchan is
handicapped by locational reasons (far from market and far
from sources of feeds other than paddy). It is further
handicapped by a higher chance of contamination which is
true in such a geographical condition as prevailing in Bang-
chan; (c) another factor limiting an opportunity for growing
a secondary crop during this period is that cash is most
scarce in this time of the year and interest rate is highest.
Any cash outlay for investment is thus discouraged. Farmers
who have any cash at all will do much better by straight
lending, or disguised lending in the form of petty trade
on credit putting a high premium on credit purchases of
50 per cent extra on articles payable in two or three months;
and (d) opportunity for wage earnings is also limited during
this period because farmers do not need any help at this
time of the year, and because successive rains prevent
extensive public work and large scale construction.

It cannot be said, however, that there is no possible way for farmers to be gainfully employed during this period of inundation. Researches along this line are needed, ones that should take into consideration details of climatic, technical, economic, and social conditions of the village.

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The lean time from the middle of February to the end of May is devoted by some villagers, mostly young men, to wage earning outside the village. The size of this temporary labor migration depends on the job opportunities, and these job opportunities depend largely on personal contact. Seasonal off farm jobs are: (a) crude carpentry work usually on nonpermanent construction where cheap temporary labor is preferred; and (b) plantation work in the sugar cane region of Cholburi some eighty miles east of Bangkok.

Inherent Excess of Expenses over Incomes

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The prevalence of debts in the form of credit purchases among Bangchan farmers indicates an excess of expenses over incomes. It has been shown that most cash loans were sought to clear high interest bearing credit purchase accounts, although some were for productive purposes. Even in this latter case, it has been observed that farmers usually borrowed no more than an amount that was immediately needed together with cash on hand to pay for the capital investment. This means that after such capital purchases there was less cash for the household and operating expenses, and so there would be a higher credit account to be settled in the following harvest.

Low incomes coupled with relatively high expenses leave little or no room for internal savings.

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The situation is aggravated by an increasing rate of consumption relative to the ability to produce. While

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434 production method and farm organization remained the same throughout, there had arisen in the course of the past four or five years new items of consumption including wrist watches, fountain pens, hair do, Coco-cola, invitation cards, admission to Miss Thailand contest, etc., which demonstrate the operation of the principle of demonstration effect par excellence. It is not difficult to see, then, that any chance increase in cash incomes due to favorable weather and economic conditions tends to be absorbed in consumption.

While consumption correspondingly expands with an increase in income, it does not decline with a contraction of income -- at least not in the same proportion. This is the principal reason for farm poverty in rice growing areas where only a single-crop system is practiced and where fluctuation of crop yield is a normal phenomenon.

As a result, the excess of expenses over incomes
426 tends to persist. High rates of interest also have made this excess greater and greater among those who fail to make proper adjustment in their credit situation. Thus, the less affluent farmers are not only poor but are actually getting poorer and poorer.

Population Pressure

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434 While low incomes and inherent excess of expenses over incomes are basic problems of Bangchan, discussions in the early chapters reveals that there are some factors contributing to the acuteness of the basic problems. One

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among these contributing factors is population pressure.

Disguised unemployment in the case of farm operators and their family workers and actual unemployment in case of farm laborers indicates a condition of over-population in Bangchan in the sense that a certain part of its population can be removed without materially reducing total production in the area.

In view of a continually decreasing supply of fish, it may be said that the situation has reached the point where it not only affects the per capita income of Bangchan residents but actually exerts pressure on means of subsistence. There are several indications of decreasing supply of fish and other marine animals in the village. First, it is the consensus of opinion gathered by our daily informal talk with villagers non of whom was found to hold a contrary view. Second, a passage in our 1948 log, "X is very lazy. Everybody here in Bangchan catches shrimps and makes his own shrimp paste. He alone does not catch shrimps even though he is among the poorest," indicates that purchase of shrimp paste was in 1948 an exception rather than a rule. In 1952, however, it was found that a total of 22.7 kilograms of shrimp paste consumed in a year by an average family, 6 kilograms, or more than a quarter, was purchased. In this latter year, 83 baht worth of fish and 54 baht of fish sauce were purchased by an average family in addition to shrimp paste as against negligible amounts for the same items in 1948 (we did not conduct a systematic consumption

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made that any program of fish raising in a closed pond, no matter how effective it may be, should not preclude the need for conservation of fish naturally existing in the open canals.

It has been pointed out that Bangchan operators produce 52 per cent of the things they need for ordinary consumption. Thus, rice growing may be seen as a farming-to-reduce-cost enterprise where maximization of profit ceases to be the primary motive of production. It has been pointed out also that rice growing is a losing concern to many operators (in terms of labor income and operator's labor earnings), but the loss has been compensated by the privilege to fish which is open to all village residents. Since the amount of fish caught constitutes the main and probably the only source of protein intake and at the same time a considerable share in the diet of villagers, continually decreasing supply of fish therefore underscores the immediate need for an effective program for fish conservation as a means to prevent the standard of living of the villagers from falling below the minimum level of subsistence.

Over-population in an area of limited job opportunities naturally creates an over supply of labor, which in turn results in low wages. This is further complicated by a wide variation of individual earning from labor of from two thousand baht annually to almost nothing, the latter being the case of transient members of farm operating families.

243 256 433 comprising the by-products of milling -- broken rice, bran, and husk. There is still a further saving when paddy is milled where it is produced, for bran would not have to be moved away from the farm as part of paddy to distant mills and then moved back again to the farm where it is bought back to be utilized as feed.

If not hampered by unnecessary government restriction, small rice mill industry will provide opportunity for local investment to which internal savings among affluent farmers may be channelized. The relatively low capital requirement and the simplicity of operation of small movable rice mills have made it possible for many Thai farmers in the northern part of the country to become successful rice millers, and there is no reason to believe that farmers in the Central Plain cannot do likewise.

Scarcity of Cash and Credit

434 437 An important factor contributing to the acuteness of the basic economic problem of Bangchan is the scarcity of both cash and credit in the village. Bangchan farmers receive cash from the sale of paddy in two periods -- from January to March, and from July to October. Most sales are expedited in the first period, when rentals and credit accounts are expected to be settled. Farmers also need cash for the purchase of goods they have forgone during the previous work season when they had little or no cash. Since there will be no sale of paddy during April - June when paddy cannot be moved through the shallow water level

434 in the canals, some cash is also needed to last the farmers
453 through the festive and merit-making dry season.

Since most of Bangchan operators are farmers whose incomes are barely or not at all enough to cover their household expenses, very few could hold their paddy stock for sale in the second period when higher prices may be expected.

[454] It has been observed that Bangchan farmers do not want to keep cash in their homes for fear of robbery. This is probably another reason for the withholding of paddy from sale in the first period in addition to the prospect of better prices. These few affluent farmers who have some paddy for sale in the second period have to sell it all before the arrival of new crop which often floods the market and forces the prices down.

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[426] Farmers usually arrange that payment for their paddy be made in the market town where they immediately pass most of the cash on to their creditors or sellers of the goods they plan to buy on that date. On the way home, they would stop over at the village stores to settle their other accounts. Thus, by the time they are back at home there is not much cash on hand to worry about. The few affluent farmers would do the same thing in their early sales -- that is, they would sell only a small portion of their crop so that there will be only a small amount of cash left on hand by the time they are back at home. In their later sales, however, these farmers must have a large amount of cash. It has